

# THE CONDOR

A Magazine of Western  
Ornithology

Volume XIV September-October, 1912 Number 5



COOPER ORNITHOLOGICAL CLUB

## CONTENTS

The Discovery of the Nest and Eggs of the California Pine Grosbeak (with 17 photos by <i>Olof J. Heinemann</i> and the author).....	<i>Milton S. Ray</i> 157
Notes from Todos Santos Islands.....	<i>A. B. Howell</i> 187
Some Birds of the Saw-tooth Mountains, Idaho.....	<i>Stanley G. Jewett</i> 191
FROM FIELD AND STUDY:	
Breeding of the Band-tailed Pigeon in Marin County, California.....	<i>Joseph Mailiard</i> 194
Some 1912 Spring Notes from Southern California.....	<i>G. Willett</i> 194
Breeding of the Scott Sparrow (with one photo).....	<i>F. C. Willard</i> 195
White-winged Dove in the San Diego District.....	<i>Joseph Dixon</i> 196
Paroquet Auklet in Humboldt County.....	<i>C. I. Clay</i> 196
An Elevated Camp (with two photos).....	<i>Charles W. Bowles</i> 196
Egrets in California.....	<i>H. C. Bryant</i> 199
Blue Jay Imitating Song of Brown Thrasher.....	<i>S. S. Visser</i> 199
The Northern Brown Towhee.....	<i>J. Grinnell</i> 199
EDITORIAL NOTES AND NEWS.....	200
Shall California Have a "No-sale of American Ducks" Law?.....	<i>W. P. Taylor</i> 200
MINUTES OF COOPER CLUB MEETINGS.....	201
Directory of Members of the Cooper Ornithological Club.....	202

Entered as second-class matter February, 1908, at the post office at Los Angeles (Hollywood Station), California, under Act of Congress of March 3, 1879.

Issued from the Office of The Condor, First National Bank Building, Hollywood, Cal.

## Price List of Cooper Club Publications

MAGAZINE			PACIFIC COAST AVIFAUNA	
Vol. I,	1899,	Bulletin of the Cooper Orn. Club (out of print)	No. 1—"Birds of the Kotzebue Sound Region, Alaska," by Joseph Grinnell; 80 pp. and map; Nov. 1900	\$ .75
Vol. II,	1900,	The Condor - \$5.00	No. II—"Land Birds of Santa Cruz County, California," by R. C. McGregor; 22 pp.; May, 1901	.25
Vol. III,	1901,	" " - 5.00	No. III—"Check List of California Birds," by Joseph Grinnell; 100 pp. and 2 maps; June, 1902	1.50
Vol. IV,	1902,	" " - 3.00	No. IV—"Birds of the Huachuca Mts., Arizona," by Harry S. Swarth; 75 pp.; April 15, 1904	.50
Vol. V,	1903,	" " - 2.00	No. V—"A Bibliography of California Ornithology," by Joseph Grinnell; 166 pp.; May 15, 1909	1.50
Vol. VI,	1904,	" " - 2.00	No. VI—Index to the Bulletin of the Cooper Ornithological Club, vol. I, 1899, and its continuation The Condor, Vols. II-X, 1900-1908, by H. B. Kaeding; 48 pp.; May 15, '09	1.00
Vol. VII,	1905,	" " - 2.00		
Vol. VIII,	1906,	" " - 1.50		
Vol. IX,	1907,	" " - 1.50		
Vol. X,	1908,	" " - 1.50		
Vol. XI,	1909,	" " - 1.50		
Vol. XII,	1910,	" " - 1.50		
Vol. XIII,	1911,	" " - 2.00		
Vol. XIV,	1912,	" " current 1.50		
Separates (a very few copies) "List of Land Birds of Placerville, Cal.," (Central Sierra Nevada Mts.) by Chester Barlow; 35 pages; 11 half-tones, Nov. 1901				.50

*Complete your files before it is too late.*

**W. LEE CHAMBERS, Bus. Mgr. "The Condor."**

Eagle Rock, Los Angeles Co., California.







# THE CONDOR A MAGAZINE OF WESTERN ORNITHOLOGY.



Volume XIV

September-October, 1912

Number 5

## THE DISCOVERY OF THE NEST AND EGGS OF THE CALIFORNIA PINE GROSBEEK

By MILTON S. RAY

WITH SEVENTEEN PHOTOS BY OLUF J. HEINEMANN AND THE AUTHOR

WITH the taking of the eggs of the Gray-crowned Rosy Finch at Pyramid Peak in June of 1910, there remained only three or four birds, known to breed in California, whose nests and eggs were yet undiscovered. One of these remaining few was the California Pine Grosbeak (*Pinicola californica*).

In recording the discovery of the nest and eggs of this bird it is a fitting time, I think, to review the published literature referring to this species, at once one of the rarest, and most interesting forms of birdlife to be found in the great Sierran woodland. It happens, however, that there is but little literature for reference; in fact, many workers in the bird's range have failed to record its presence at all and few have found it in any abundance. Although the majority of these workers were in the field during the summer months, the home life of the California Pine Grosbeak has remained unknown. The table on the next page gives the published records of the bird's occurrence.

Belding (1890) writes as follows: "Summit, Central Pacific Railroad, August 11, 1882, tolerably common; from June 23 to July 10, 1885, an adult male and female feeding in alders; during this time these only; but later, in August and September, not rare, in fact rather common. Blood's [Calaveras County] July 16, 1880, shot an adult female which probably had a nest; specimen sent to Smithsonian Institution."

Dr. A. K. Fisher, in his report on the birds of the Death Valley Expedition (1893), says of this species: "Mr. Nelson saw a fine adult male pine grosbeak in brilliant plumage on the head of the San Joaquin River, July 30 [1891]. This individual was the only one seen during the year."

W. W. Price, who was first to separate this bird from the eastern form,

TABLE SHOWING RECORDED OCCURRENCES OF THE CALIFORNIA PINE GROSBEEK

RECORDED BY	YEAR	LOCALITY AND REMARKS	PUBLICATION
James G. Cooper	1868	Johnson's Pass, Sierra Nevada, Sept. *	Proc. Calif. Acad. Sci., iv, p. 8
" "	1870	Resident on high Sierra Nev.	Orn. Calif., i, p. 151
Baird, Brewer and Ridgway	1874	Summit Central Pac. R. R. Pass, 7000 ft.	Hist. N. Am. Birds, i, p. 453
Robert Ridgway	1878	Soda Springs, Placer Co.	Bull. Nutt. Orn. Club, iii, p. 66
Lyman Belding	1879	Soda Springs, Sept.	Proc. U. S. Nat. Mus., i, p. 412
" "	1890	Blood's, Calaveras Co., July 16, 1880	Land Birds Pac. Dist., p. 131
" "	"	Summit, C. P. R. R., Placer Co. August 11, 1882, and between June 23 and Sept., 1885	" " " " "
A. K. Fisher	1893	Head San Joaquin River, July 30, 1891	N. Am. Fauna, no. 7, p. 79
William W. Price	1897	Pyramid Peak, August 5, 1892	Auk, xiv, p. 184
" "	"	Silver Lake, Amador Co., June 27, 1895	" " p. 185
" "	"	Pyramid Peak, July and August, 1895 and 1896	" " "
Chester Barlow	1900	Forni Meadow, El Dorado Co., June 9, 1900	Condor, ii, p. 107
Milton S. Ray	1910	Pyramid Peak Plateau, El Dorado Co., June 9, 1910	Condor, xii, p. 149
" "	1910	Pyramid Peak, June 10, 1910, altitude 9000 ft.	" " "
" "	1912	Lake of the Woods, El Dorado Co., July 1, 1909	Condor xiv, p. 13

\* Two skins taken by J. G. Cooper are now in the California Museum of Vertebrate Zoology. These bear data in Cooper's handwriting as follows. Mus. no. 4134: "*Pinicola* | Summit Johnson's Pass | Sept. 22-63 J. G. C." (The other side of the label gives measurements; the bird is evidently an immature male, though the sex mark is omitted.) Mus. no. 4133: "*Pinicola Canadensis* ♂ | Summit, Placer Co., Cal. | July 26th, '70 J. G. C." (The other side of the label gives measurements and color of iris, bill and feet.)

writes as follows (1897): "This apparently very distinct *Pinicola* is an inhabitant of the higher Sierra Nevada Mountains of Central California. It is strictly an alpine species; I have never seen it below 7000 feet and I have taken it near the timber-line. It is peculiar to the belt of tamarack pine (*Pinus murrayana*), and the beautiful red alpine fir (*Abies magnifica*), and most of the specimens taken were in groves of this latter tree. According to my observations this bird is uncommon, for, during several vacations spent in the higher Sierra, I have met with it only on rare occasions. The first time I saw this Grosbeak was on the evening of August 5, 1892, near Pyramid Peak. I was returning to my camp along the margin of a shallow alpine lake, bordered by a dense growth of *Abies magnifica*, when a grayish bird flew fearlessly to the edge of the water within a few feet of me. The color was so very similar to that of Townsend's Solitaire, *Myadestes townsendii*, I might in the twilight have passed it for that species had I not caught a glimpse of its large and heavy bill. I secured it, and to my surprise found it an adult female *Pinicola*, the first I had ever seen from California. I saw no more that summer though I spent over a month in the higher altitudes.

"The next time I observed the species was in 1895. I obtained, June 27, a fine male near Silver Lake in Amador Co. (about 20 miles due south of Pyramid Peak), and saw on the same date a female which was evidently its mate. No

more were seen in that locality, but in July of the same summer I saw two or three individuals in fir woods on Pyramid Peak, but secured none.

"Last summer, 1896, I again visited Pyramid Peak, and was fortunate in getting a fine series of *Pinicola*, 20 specimens in all, and of which all but 4 were available for examination in making the present report. I was assisted in my field work by Mr. C. S. Dole and Mr. P. O. Simons, and to their efforts is greatly due the large and interesting series.

"The greater number of adults were taken on the edges of Alpine pastures where salt is placed on fallen logs for stock. The Pine Grosbeak visits these 'salt licks' in company with Cassin's Purple Finch and the Western Evening Grosbeak, and was at all times exceedingly fearless and unsuspicious. The males have a



Fig. 62. UPPER PORTION OF THE FORNI MEADOW, LOOKING NORTH; THE FORNI CABINS CAN BE SEEN AT THE EXTREME UPPER END TOWARDS THE BASE OF PYRAMID PEAK; PHOTOGRAPHED ON OUR FIRST VISIT JULY 7, 1902, ON WHICH DATE THE SNOW HAD ALMOST ENTIRELY DISAPPEARED

very pleasing song, and hearing it upon one occasion, I thought it resembled the song of *Carpodacus cassini*. Their call note is not loud and grating like the note of the Evening Grosbeak.

"They breed late, as attested by two nestlings brought to me July 29, by a camper, who found them on the lower branches of a fir in a wild glen at the western base of Pyramid Peak, at about 9000 feet elevation. He did not see any nest, nor did the parent birds put in an appearance. The same day Mr. Dole and Mr. Simons each obtained a young specimen, perhaps five days older. They could fly quite easily. On August 3, while collecting in a forest of fir east of Pyramid Peak, Mr. Dole obtained two additional young, which were

nearly full grown. The female parent which was feeding them was also secured.

"The crop and stomach of an adult contained the soft leaf ends of *Pinus murrayana* and *Abies magnifica*, besides seeds and portions of various insects.

"Unlike the Pine Grosbeak living in the far north, these birds probably find it unnecessary to migrate any great distance in winter. If the weather is too severe on the alpine summits, they can in a moment drop down into the deep cañons which furrow the western flank of the Sierra, and find a temperate climate and abundance of food."

In a recent letter (August 2, 1912), Mr. Price advises that with the exception of the fact that he has observed the bird in the summer time of various years since, he has no further notes than those already published. By reference it will be seen that Price does not include this species in his account of "Some Winter Birds of the High Sierras" (Condor, vi, p. 70), and in answer to my question he states that he has no winter record of the bird at all. Mr. Joseph Grinnell



Fig. 63. UPPER PORTION OF THE FORNI MEADOW, LOOKING SOUTH; PHOTO TAKEN JUNE 11, 1911; COMPARE WITH FIG. 62

informs me that as ornithologists living in the Sierran foothills have never recorded the bird as a winter migrant or winter visitant and that as he found the Alaskan bird, *P. e. alascensis*, resident in the Kowak Valley, it can be quite safely assumed, by inference, that the Californian bird is likewise permanently resident in the Boreal zone of the Sierras.

Price described the California Pine Grosbeak as a *subspecies* somewhat in opposition to the canons of the American Ornithologists union; for he says "I have seen no examples of intergradation. However, these may be expected from the higher mountains northward." Mr. Joseph Grinnell informs me that no birds have ever been recorded north of Placer County, except those of another form near Mount Baker, Washington, and in British Columbia. On account of there being no examples of intergradation (due to the bird's isolated habitat) and to sharply defined differences existing in shape of bill between this and

other birds of the genus, the California Pine Grosbeak should stand as *Pinicola californica*, a distinct species.

Chester Barlow (Condor, II, pp. 107, 109, and III, p. 169) tells of the Pine Grosbeak as follows: On June 9, 1900, "while we were passing through a decided bog, we met our first California Pine Grosbeak quietly feeding beside an old log." The bird, a male in brilliant red plumage, was very tame and was probably nesting in the vicinity. "At this place the red firs hold numerous accumulations of needles about the size of a nest, which would render the location of a nest difficult excepting by watching the bird." "We saw others of this species, which seems to be a fairly sociable bird, two males coming to a tamarack within a few feet of our camp." It is "seemingly a species of irregular distribution, not occurring below 6,000 or 7,000 feet." "The only note so far as observed consisted of a harsh call note very similar to that of the Louisiana Tanager."

Dr. Sterling Bunnell, who has traveled along the Sierran crest from Mt.



Fig. 64. OUR 1911 PARTY AT FORNI'S, TAKEN JUNE 11; LEFT TO RIGHT, CARRIGER, RAY, LITTLEJOHN; THE ROOF OF ONE OF THE CABINS DEMOLISHED BY WINTER SNOWS CAN BE SEEN IN THE BACKGROUND

Whitney to Shasta, says in a letter under date of July 8, 1912, that notwithstanding the extensive territory he covered, his notes on the occurrence of this bird are so few they would scarcely be worthy of publication.

During the past summer I had the pleasure of being some days afield with Messrs. Forrest Hanford and Loren E. Taylor, both of whom are veteran observers in the Sierras, and I am indebted to Mr. Hanford for the following notes. "After spending a number of summers in the Sierras, in the vicinity of Pyramid Peak and Lake Tahoe, I find my notes on the Pine Grosbeak somewhat limited; in fact, my records of not observing the Grosbeak are many more than the few individuals noted, and perhaps the only value of the few notes I have been able to gather would be to show its scarcity in its summer breeding ground and in country seemingly well adapted in altitude and food supply for this species.

"In July, 1902, Mr. L. E. Taylor and I made a trip through the Silver Creek

region, about three miles west of Pyramid Peak. Our way led mostly through forests of red fir and tamarack pine; at Blakeley's three Pine Grosbeaks were observed feeding along the west bank of Silver Fork. The next day, some miles north of Wright's Lake, two Grosbeaks were seen quietly feeding among red firs bordering our road.

"On June 6, 1904, Peavine Ridge was crossed to Silver Creek, over snow in many places. At Blakeley's, near Wright's Lake, snow was banked up to the window sills. Seven or eight days were taken up in ranging through the country, but no Grosbeaks were observed.

"This year, 1912, Taylor and I camped for some days at Star Lake, and a little later, in the beginning of July, two weeks were spent at Lake-of-the-Woods, near Pyramid Peak. On our return journey we crossed Devil's Basin into Rock-bound Valley and through Emerald Bay Gorge to Lake Tahoe, and though we traveled through miles of forest almost every day of our outing no Pine Grosbeaks were seen."

The following table shows our previous fieldwork in Pine Grosbeak territory, all of which, with the exception of "Spoooner-Marlette Lake", lies within Californian territory. The record of July, 1902, I have questioned as I did not see the bird at close range. As we work some distance apart, where there were more than one afield, joint mileage is given.

TABLE SHOWING OUR PREVIOUS FIELDWORK IN THE RANGE OF CALIFORNIA PINE GROSBKAK

FIELD WORKERS	DATE	VICINITY	ELEVATION	MILES C'V'R'D	BIRDS SEEN
Ray	June 4, 1901	Phillips' Station	6500 to 7600	5	0
"	June 16, 1902	" "	" " "	5	0
"	June 21, 1902	Star Lake	7500 to 9000	8	0
"	July 1, 1902	Grass Lake	6500 to 7300	3	0
"	July 3, 1902	Phillips' Station	6500 to 7600	5	0
"	July 4-7, 1902	Pyramid Peak Region	7000 to 9000	25	1 (?)
"	June 10, 1903	" " "	7000	4	0
"	June 11-12, 1903	Phillips' Station	6500 to 7600	15	0
"	June 26-27, 1903	Star Lake	7500 to 9000	12	0
"	August 12, 1906	Phillips' Station	6500 to 7600	5	0
"	August 24-25, 1906	Star Lake	7500 to 9000	12	0
"	September 6, 1906	Phillips' Station	6500 to 7600	5	0
"	June 3, 1909	Cold Creek Meadows	7500	4	0
"	June 11-13, 1909	Deerington's	6700 to 7600	11	0
"	June 22-24, 1909	Spoooner-Marlette Lake	7000 to 8000	14	0
"	June 28-July 1, 1909	Star Lake-Lake of the Woods	6500 to 8500	29	2
" and Carriger	June 5, 1910	Cold Creek Meadows	7500 to 8500	16	0
" " "	June 9-13, 1910	Pyramid Peak Region	6500 to 9000	90	10
"	June 19-24, 1910	" " "	" " "	34	5
"	June 28, 1910	Cold Creek Meadows	7500	5	0
" and Carriger	June 10-14, 1911	Pyramid Peak Region	6500 to 9000	117	2
and Littlejohn	June 24, 1911	Cold Creek Meadows	7500	5	2
Total Days 40				Total Miles 429	Total Birds 22

My own first field work in the haunts of the Pine Grosbeak was about Phillips' Station on the summit of the Lake Tahoe stage road, June 4, 1901. The work here, like that on June 16 of the following year, was done while en route to Lake Tahoe and was not extensive. No Pine Grosbeaks were observed on either trip. During 1902 I visited Star Lake on June 21, Grass Lake July 1 and Phillips' Station for the second time on July 3, but failed to find any of the birds.



From July 4 to 7 was passed at various points in the very heart of the home country of *Pinicola*, Wright's Lake, Forni's and Pyramid Peak; but only on one occasion was a bird seen referable to this species. On July 6 while edging around a snow-fringed lake at 9000 feet altitude, on the southwest slope of Pyramid Peak, I saw a bird fly from a tall hemlock that appeared to be a Pine Grosbeak; the distance, however, prevented me from being absolutely positive of its identity.

On June 10 of the following year (1903) we attempted to reach this region but failed. A record of this trip (*Auk*, xxii, p. 364) in part reads as follows: "June 10. Our experience today will be long remembered. Thinking that even

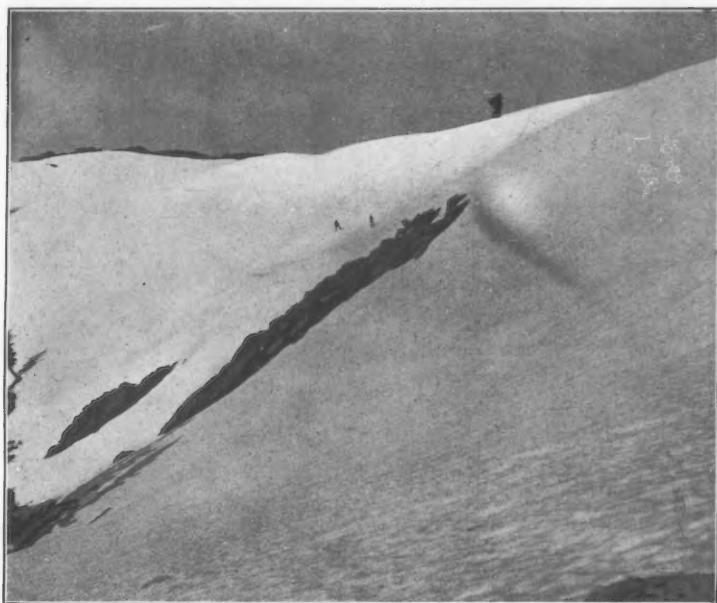


Fig. 65. A GREAT SNOW-DRIFT OF 1911, THE YEAR OF "MORE SNOW THAN THE WHITE MAN EVER BEFORE SAW"; CARRIGER AND LITTLEJOHN CAN BE DISCERNED IN THE TOP CENTER OF THE PICTURE; ELEVATION AT TOP OF DRIFT 8500 FEET, THUS BELOW TIMBER-LINE; PHOTO TAKEN JUNE 12, 1911

if snow should cover the road, we could reach Forni's, at the base of Pyramid Peak, we left the main highway at Georgetown Junction at noon and began the ascent by a steep road used only by dairymen in the late summer. Many fallen trees, the work of winter storms, lay across the road, and much accumulated brush impeded our progress, which, even at the best, was slow. We felt rewarded for our efforts, however, when we reached the summit, where the willows were only in bud and the grass just peeping out. Numberless chickadees were flitting about, besides various other species of bird-life. Our elation was short lived, however, for a blinding rain-storm, ushered in with terrific thunder and lightning, soon made dismal the merry, sun-lit woods. \* \* \* After a while the rain

ceased and we proceeded on our way, but soon the deep snow made the road impassable, and we were compelled to unharness the horses, packing only the necessities on their backs, in order to continue. In places small streams had undermined the snow, in which the horses would sink deep, shifting the pack in their efforts to right themselves. Half a mile of this disheartened us and we turned back; but when we reached our wagon we found we were unable to turn it on the narrow road-bed. Not having eaten since breakfast, and being wet and cold, we were indeed in a sorry plight. After unloading the wagon we finally succeeded, inch by inch, in turning it around, and a mad ride down the grade brought us again to Georgetown Junction; and a few miles farther on we reached Echo, where we built a roaring camp fire and dried our outfit."

From June 11 to 13 (1903) was spent in fieldwork at Phillips' Station, but without noting any Pine Grosbeaks; nor were any seen in the vicinity of Star Lake where we camped on June 26 and 27.

In 1906 the Lake Tahoe region was visited in August and September, a much later time than on any previous trip, and when one would rather expect to find juvenile *Pinicola* in evidence. Fieldwork was done in the higher altitudes, at Phillips' Station August 12 and September 6, and at Star Lake August 24 and 25; but none of the birds in question were recorded.

During 1909 a trip was taken to Cold Creek Meadows on June 3, while from June 11 to 13 was spent at Deerington's, a mile east of Phillips' Station. At both places owing to the lateness of the summer the ground still lay hidden beneath deep snow. Although all of the commoner alpine species were met with in their usual numbers, I failed to find any Pine Grosbeaks. On June 24, at Marlette Lake, Nevada, 8000 feet altitude, the Ruby-crowned Kinglet, Sierra Grouse, Clarke Nutcracker, Sierra Hermit Thrush and other boreal birds were found, but none of the much-sought Grosbeaks. On June 28 Heinemann and I started on an extended tramp through the mountains that encircle the southern end of Lake Tahoe.

It was near the end of the trip, at Lake-of-the-Woods, elevation 8000 feet, on July 1, that we saw our first Grosbeaks. It was a little after daybreak and, as the welcome rays of the morning sun came filtering through the trees about our camp, we became aware of the presence of a pair of these birds. The Pine Grosbeaks were watched with that extreme interest which must ever be given by the oologist to birds whose eggs remain unknown to science. The pair staid about our camp for some time, feeding on the ground and in the trees. If the birds were nesting we failed to gain any clue of it from their actions, for they flitted from branch to branch and from tree to tree in a leisurely and unconcerned fashion, finally taking wing across the lake and disappearing in the heavy timber.

While our efforts in 1910 were principally confined to taking the eggs of the Gray-crowned Rosy Finch, nevertheless it was on the two journeys to Pyramid Peak in quest of these eggs that we found more Pine Grosbeaks than in all the previous years combined. In 124 miles of fieldwork fifteen birds were seen, which shows, however, that the bird must be considered rare even in the most favorable localities. We found the bird absent in seemingly suitable territory which would show its distribution to be rather irregular. During all the previous years that we traversed this same region we found only a small fraction of the number now observed, which would further prove the bird's occurrence to be rather uncertain as well.

We saw the first bird for the season of 1910 on the Pyramid Peak Plateau



at 7500 feet elevation, on June 9; another was seen on the slope of Pyramid Peak at 9000 feet altitude on June 10; and on the day following 500 feet lower we watched a pair in a grove of firs for a considerable length of time. At Lake-of-the-Woods we noted another pair on June 12. Mr. Carriger also observed a lone individual; and, later in the day, on the top of a nearby ridge at 8500 feet, another pair was seen. On June 13 near Deerington's, at 7400 feet, we came upon a male, in rich red plumage, sitting on the branch of a pine sapling a few feet up.

All the birds were remarkably tame, seemingly taking but little notice of our proximity, and all were watched as long as it was practicable. We observed most of them feeding, usually in the trees although occasionally on the ground. Others, quietly perching on some pine or fir branch, sat for such a long time unmoved as to give us the impression that they were either admiring the scenic surroundings or indulging in a day-time nap after the manner of a nighthawk.



Fig. 66. PERSONNEL OF THE 1912 EXPEDITION LEAVING  
BASE ON LAKE TAHOE, JUNE 11; LEFT TO RIGHT,  
LITTLEJOHN, "JIM", RAY, HEINEMANN

No birds were heard to sing, and the mellow call note was given but infrequently. Carriger freely acknowledged as we left the summit that, in respect to their nesting habits, the birds presented the most puzzling problem that he had ever attempted to solve.

On the second trip to Pyramid Peak in 1910 I noticed five more birds, three at Lake-of-the-Woods on June 22, and two near Phillips' Station June 23. Although somewhat later than our previous trip, the actions of the birds remained the same and no progress was made towards solving the problem of the bird's nesting.

On our return to San Francisco, in reviewing the results of our work afield, while we had to acknowledge that we had made little or no headway in the solution of the Pinicolan nesting problem, it was this very elusiveness that made us the more determined to persist. So, like the trip of 1910 that was planned pri-

marily to take the eggs of the Gray-crowned Rosy Finch, that of 1911 had one principal object in view, to take those of the California Pine Grosbeak.

During the winter and spring of 1911 it was reported that there was more snow in the High Sierras than the white man had ever seen before, and as I found on reaching Lake Tahoe, on May 13, that the truth had not been exaggerated, Carriger and Littlejohn, who were to join me, delayed coming until June 4, and even then it was not deemed advisable to start to the Pyramid Peak region until six days later. As all over the summit country we found deep snow, we naturally expected to find it still deeper up around Pyramid Peak, but we were scarcely prepared for the sight that met our gaze at the top of the Echo-Forni trail the following afternoon, June 11.

Under the lofty pines and firs, stretching unbroken in every direction, were great snowy drifts, so high in places that the smaller trees were almost hidden, while meadows, roads and brooks, all lost to view, made once familiar localities now hard to recognize. In places the larger streams had cut their way through the snow, leaving high steep banks rising on each side, to cross over which was both difficult and dangerous. In other places the soft condition of the snow and hidden water beneath made travelling even more perilous. Notwithstanding the deep snow considerable birdlife was in evidence, although not, it seemed, in its usual abundance. At 7500 feet altitude, where snow on the ground was over ten feet in depth, Carriger excavated the nest of a Mountain Chickadee holding eight almost fresh eggs; and, as another nest of this bird had been found in the morning near Phillips' Station with seven eggs, it was evident that while the severe climatic conditions had somewhat delayed, they had not prevented, these birds from nesting.

Although we had left Phillips' Station at 6:45 A. M., it was 2:35 P. M. before we came to the lower end of the Forni Meadow. From here we were glad to see that some of the old dairy houses were still standing after the storms of a winter that had destroyed so many homes at much lower altitudes. As we neared the cabins Carriger and Littlejohn, weary of the heavy pack and the hard climb, could not refrain from hurrying on; but I stopped for a time in order to take the photograph herewith shown (fig. 63).

The following morning we arose by candle light and by 5:50 A. M. we were plodding up over the snow, which was now hard, to still higher elevations. The extent of these drifts at 8500 feet is shown in the accompanying picture (fig. 65). The weather continued sultry and the heat, due to the reflection from the snow and to the lack of a breeze in the narrow snow-cañons, was very oppressive. Although we worked the entire day, scarcely pausing for a rest, we did not find a single Pine Grosbeak, notwithstanding, too, that we listed twenty-four species of birds and worked from 7,500 to 10,020 feet altitude. The only nests found during the day were one of the Mountain Chickadee with six fresh eggs, one of the Sierra Creeper with two eggs, also unincubated, a newly drilled home of the Williamson Sapsucker, and a just completed nest of the Blue-fronted Jay.

There was considerable difference of opinion among the members of our party as to why we had failed to find any representatives of the sought for Grosbeaks. Personally I was in favor of further field work, but as no one echoed this sentiment and as our scanty supply of provisions precluded more than another day's stay, we finally decided to leave the following morning. A different and longer return route was selected, however, which would allow us to make considerably further search between 7000 and 7500 feet elevation.

We reached Phillips' Station late the following afternoon, however, without having seen a single Pine Grosbeak. In ornithology, as in politics, it seems that the unexpected so often happens; and so it occurred the following morning, when we came upon a pair of the long-sought Grosbeaks by the roadside near Deerington's. One of the birds was on the ground and the other on a fir bough just above. The discovery brought us to an abrupt standstill, and while engaged in observing the pair we saw with disgust the approach of a six horse mountain team. On it came, with the crack of whip, the creak of wheels and the clatter of hoofs. Our birds paused a moment and then took wing. Wistfully we watched them as they flew up the mountain side until they were lost to view. With the exception of a pair I closely observed for several hours feeding in the trees on



Fig. 67. ECHO, ELEVATION 5700 FEET, THE NEAREST POST-OFFICE TO THE TYPE LOCALITY OF *Pinicola californica*; THE PHOTO GIVES AN IDEA OF THE RUGGEDNESS OF THE COUNTRY EN ROUTE; IT IS NEAR HERE THAT BOTH A TRAIL AND A ROAD START FOR THE PYRAMID PEAK REGION, THE FORMER BEING DIRECTLY ACROSS THE STATE ROAD OPPOSITE THE TALL DEAD TREE IN THE FOREGROUND

the edge of Cold Creek Meadow on June 24 these were the only birds seen during the year 1911.

At the beginning of the present year (1912), notwithstanding past reverses, plans were laid for a return journey to the Pyramid Peak region to make another search for the eggs of the California Pine Grosbeak. Both Littlejohn and I desired to make another attempt, but Carriger, although also willing, found that he would be unable to accompany us. Heinemann, my companion on many former trips, volunteered his services as photographer, of which we were very glad to avail ourselves.

By early spring every detail was carefully worked out, as we endeavored where we could to overcome the difficulties and prevent the mistakes of previous

years. Among other things suggested was the advisability of seeking some new territory in the bird's range. Grinnell in his *Check-list of California Birds* gives this as "the Boreal Zone of the Central Sierra Nevada Mountains from Placer County south to Fresno County." After due consideration, however, we all agreed that familiarity with any locality was a decided advantage and the Pyramid Peak region polled a unanimous vote.

The second point to be settled was the transporting of sufficient supplies to allow for a stay of at least ten days in the region. The High Sierras above 7500 feet altitude are by no means easy of access, as at these elevations deep snow often covers the ground until July or later; it is in fact this inaccessibility of the bird's summer home together with its restricted geographical range, that accounts for its eggs being peculiarly difficult to secure. Experience had proven that we were unable to carry sufficient supplies afoot and as it would be impracticable to use either a horse and wagon or pack-horses, a pack-burro appeared to be the only possible solution. This invaluable aid to our quest we arranged to obtain at Lake Tahoe.

In the matter of stores, Heinemann, commissary-in-chief, prepared a list of provisions, especially adapted to the trip, which would allow for exactly twenty cooked meals, and ten luncheons in the field. Each meal was portioned out and labeled and, on our return, the consensus of opinion was that the method was a decided improvement over the usual way. Our equipment in other respects was equally complete and included, among other things, waterproof covers for all members of the party, including the pack-burro, which would enable us to continue notwithstanding the rain or snowstorms which are of common occurrence at any time in these altitudes, regardless of the calendar, the predictions of the weather-bureau, or the pleasant prophecies of the spring-poet.

In the Pyramid region the pines and firs often spear skyward to such a height that a nest, located in some situations, would be inaccessible by ordinary methods of fieldwork. Frequently with these giants of the forest it is from 60 to 90 feet before the first limb branches out, and owing to the hugeness of the trunk and the soft condition of the bark, steel climbers are practically useless. To overcome this difficulty we carried long coils of rope and sufficient carpenter tools to build a rough staging if necessary. Of primary importance, too, was a really wonderful contrivance of Chase Littlejohn's that would enable us to lift eggs from a nest on a branch even fifteen or twenty feet out, and with perfect safety. Equally invaluable, too, and also devised by Littlejohn, was a partitioned collecting case with removable compartments lined with eider-down cloth. Specimens placed in this case could be lowered, in offhand fashion, from any height, in absolute security.

But by far the most important point to be settled was the selection of the proper time to visit the region. As no actual nest of the bird had ever been found, this was purely a matter of individual calculation. To go by the scant information obtainable one had two diverse alternatives: on the one hand was Price's statement that the birds were late breeders, as he had seen young birds just out of the nest on July 29 (which would make about July 1 a proper time for eggs); while on the other hand (speaking of another subspecies of the Pine Grosbeak found in the Rocky Mountains) was Coues' statement that near the timber line in Colorado he noted young birds fully fledged in June. This latter, although an indefinite date, would put the proper time at least a month earlier than the date by Price's reckoning.

Personally, however, I was not greatly influenced by the findings of either Price or Coues, for while I considered them both to be correct in their statements I further believed Price had simply found the young of late, and Coues of early, breeding birds. Being of this impression I had nearly always visited the region during the month of June; for I could see no reason why the nesting time of *Pinicola* should be so radically different from 95 percent of the Sierran avi-fauna, which nests between May 15 and June 30, and especially as the remaining five percent consisted of such remarkably early nesting birds as the Clarke Nutcracker, Canada Goose, American Merganser and some of the Raptors.

The fact of *Pinicola* being resident, or at least migrating only a short distance, too, seemed to indicate that the time of nesting would be rather earlier than later, notwithstanding the high altitude of its home; for being undoubtedly a tree-nesting bird and arboreal in its habits it did not seem that it would be so



Fig. 68. "JIM" AND HEINEMANN ROUNDING A PRECIPITOUS MOUNTAIN SIDE AT 6500 FEET ALTITUDE

greatly affected by the depth of snow on the ground, or other severe climatic conditions; as to delay nesting a month later than the majority of species in the same habitat. Littlejohn suggested that if there was a delay it might be caused by the lack of some certain food supply for the young. To me, however, this explanation did not seem tenable.

While our own observations rather favored Price's theory in the respect that no young of the year were noted in June or early July, yet on the other hand they also favored Coues' in that we found no birds engaged in nest building in late June or early July which according to Price would be the proper season for such operations. In fact, as before stated, we found at all dates the birds apparently leading a sort of Bohemian life; but I accounted for this pelagic habitus by the fact that as the extreme limits of the nesting season of most Sierran birds extended from May 10 to July 15, it allowed them considerable latitude in this respect.

To give examples of this wide variation in nesting dates of individual species I may state I have found scattered pairs of various birds nesting in Lake Valley between May 15 and 20, while the majority were still in flocks. To cite another instance: on the shore of Lake Tahoe on June 25, 1911, young-of-the-year of *Carpodacus cassini* were noted, while a few yards away I flushed another bird of the same species from a nest containing two fresh eggs.

Two other reasons could also be offered for the wandering mode of life of *Pinicola*. One of these was that the birds were so extremely wary that it was impossible to either flush them from a nest or see them return to it and that their continued journeying through the woods was simply done in their efforts to lead us away from their nesting grounds. Another explanation was that many of the so-called pairs observed were not in reality pairs at all but two males, as Ridgway, writing of the nearly allied form *canadensis* states (Birds of North and Middle America, I, p. 61): "Some *males* (immature?) are exactly like the



Fig. 69. A MEADOW-EDGE NEAR FORNI'S WHERE A PAIR OF CALIFORNIA PINE GROSBREASTS WAS SEEN JUNE 14, 1912; ALTITUDE 7500 FEET

adult *females* in coloration." Although Price made no mention of this strange condition existing in any of the specimens he secured of *californica*, yet, on account of the close relationship between this bird and *canadensis* such a condition seemed not at all unlikely.

Basing my calculations upon my theory in the matter and after a careful comparison of nesting dates of certain species for a number of seasons at Forni's (7500 feet), Phillips' Station (6900 feet) and Lake Valley (6220 feet), it seemed apparent to me that June 1 of a *normal* year would be the proper date to visit the region. At this time, I felt, that some birds at least would be found engaged in nest building, and nest-building time is often the only period when nests difficult to find can be located; and from the height of the trees and the thickness of their foliage it appeared that those of the Pine Grosbeak would be of this nature.

To find just what date in 1912 June 1 of a *normal* year would be, however,



was not particularly easy; for each Sierran summer is somewhat different from the preceeding and what might be termed the "shift" of the Sierran season which results from a number of causes, is very puzzling. In lower zones, here along the coast, for instance, hummingbirds have been found nesting in January, bush-titnices in February, chickadees in March, juncos in April, warblers in May, flycatchers in June, and vireos in July. In the High Sierras, however, the season of reproduction is very short and with few exceptions all birds nest between May 15 and June 30; it is on account of this shortness of the season that the "shift" has such a marked effect. Above 7500 feet altitude there are but very few resident species and in the lower zones it is this class that contains the bulk of the early breeders.

The season of 1910 in the Tahoe region was one of the earliest known to the old settlers and, in respect to nesting conditions, was at least from fourteen to



Fig. 70. HEINEMANN AND LITTLEJOHN ON THE SNOW  
NEAR TIMBERLINE AT ABOUT 8750 FEET ALTITUDE;  
PHOTO TAKEN JUNE 17, 1912, WHILE EN  
ROUTE TO PYRAMID PEAK

sixteen days earlier than normal. On the other hand, 1911 was a year of very heavy snow-fall and about a week later than normal. On June 9, 1910, we found only scattered patches of light snow on the Forni meadow, while on June 11 of 1911 we found it from 6 to 10 feet in depth. With the coming of 1912 it seemed the weather pendulum was swinging back again, for the winter remained remarkably mild in character. We kept a close watch on the snow reports of the U. S. Weather Bureau, and the following table shows comparative conditions for the last six years on February 28.

TABLE SHOWING INCHES OF SNOW ON GROUND FEBRUARY 28

	1907	1908	1909	1910	1911	1912
Summit S. P. R. R., Placer Co., 7018 ft. altitude	88	74	213	72	215	23
Tahoe City, Lake Tahoe, 6220 ft. altitude	—	—	66	40	78	19
McKinney's, Lake Tahoe, 6220 ft. altitude	—	—	72	38	79	14

The spring weather continued mild and trains were run on mountain routes and stock was turned out to pasture, around the lake, long before the customary time. In fact everything now pointed to an unusually early summer. Littlejohn was the first of our party to visit the Tahoe region, reaching the Lake at the end of April. While the purpose of his trip was more particularly to study Tahoe's water-bird-life, nevertheless he kept a sharp lookout for Pine Grosbeaks as we were especially interested to know whether they occurred in Lake Valley at this season. If they could be found at this altitude (6220 feet) it would be conclusive evidence that, having to migrate to higher elevations to nest, the birds could scarcely do so before May 15 or later.

While Littlejohn secured some very interesting specimens and notes on spring migration no trace of Pine Grosbeaks was found. During his stay, which was until the first week in May, storms of hail, sleet or snow prevailed almost continually, and while of course at this altitude the late snow quickly melted, this change in weather conditions greatly retarded the nesting time of Sierran bird-life.

The writer reached Bijou, Lake Tahoe, our 1912 base, on May 19, in time, should the season be early, to still reach the Pyramid Peak region at a proper date. En route to Bijou conditions everywhere showed it to be a year of unusually light snowfall. The afternoon I arrived was stormy and light snow began falling and continued intermittently for three days, making field work very disagreeable. Two days about Bijou convinced me that notwithstanding the mild winter the avian nesting time would not differ greatly from that of 1911, a year of extremely heavy snow-fall. To find exactly what this difference would be, however, required considerable further field-work. By the 25th of May I felt sure of the late seasonal conditions and immediately wrote Heinemann and Littlejohn to change the date of their arrival from May 28 to June 8.

Heinemann arrived on the above date and Littlejohn the day following. As our pack burro had already been brought up two weeks previously from Carson Valley, Nevada, there was nothing to delay our departure. We left Bijou at ten o'clock on the morning of June 11 and if the picture taken before we started shows some new innovations in loading a burro the credit must be given to Littlejohn. Although the day was very sultry and the road the greater part of the way led through heavy granite sand, our burro, a very willing animal, led by a rope, followed us without urging. Meyer's Station, at the foot of the stage-road summit was made at 1:26 p. m. Here we fell in with McMillan, a forest ranger who very kindly helped us to rearrange the entire pack and also initiated us into the use of the almost indispensable "basco hitch" in roping it on. Meyer's was left at 3 p. m.

On the way to Phillips' Station we noted a number of the rarer forms of alpine bird life, as well as several interesting nests with eggs, and near Deerington's I saw the first California Pine Grosbeak of the year as it flew from a tall fir by the roadside into a distant maze of foliage.

We felt, with the occurrence of this bird on our first day out, that the trip had started auspiciously; but when, sometime later at Phillips' Station, we saw *three* of the birds alight but a few feet from us, on a large and brightly colored umbrella that shaded the seat of a mountain lumber wagon it almost took our breath away. The birds staid but a few moments, however, and before a gun could be brought they had winged their way across the meadows to the thick timber of a neighboring cañon. Needless to say our now famous "flock" of



grosbeaks remained the principal topic of conversation for some time to come.

As we had planned previously we set out next morning to work the summit country around Phillips' Station to secure if possible a Pine Grosbeak or so for the purpose of determining, by dissection, the nearness of the nesting date. Near Deerington's Littlejohn saw our fifth bird, but was unable to secure it. A heavy and very steady rain now set in and finally forced us to seek shelter in an empty cabin. Hour after hour the rain rattled on the roof, and twice I made short journeys to nearby groves but the steady downpour had driven most birds to shelter and as it had made travelling very unpleasant, after the second attempt I desisted and joined Littlejohn and Heinemann who were dozing before a cheerful fire in the cabin. At four o'clock, as the storm showed no sign of abating, we returned to Phillips' Station.



Fig. 71. VIEW FROM PYRAMID PEAK, 10,020 FEET ALTITUDE, LOOKING NORTH; THE CALIFORNIA PINE GROSBEEK HAS BEEN NOTED UP TO TIMBERLINE, WHICH OFTEN EXTENDS TO 9250 FEET; CRYSTAL PEAK IS IN THE IMMEDIATE FOREGROUND; DICK'S PEAK, 10,015 FEET, IS THE HIGH MOUNTAIN RISING IN THE BACKGROUND; PHOTO TAKEN JUNE 17, 1912

Although it was still cloudy the rain had stopped and Wade, as the above place is also called, was left at 8:45 next morning. The road, going west, descends sharply and at 10:45 we reached Echo, 5700 feet elevation. Here, near the foot of the high cliffs shown in the picture (see fig. 67), Littlejohn saw a flock of six Band-tailed Pigeons (*Columba fasciata*), a bird of rare occurrence in this region.

At 2 P. M., after lunch by a roadside brook, we came to the Georgetown Junction road which is marked by the ruins of a tall, solitary chimney, all that remains of a famous pioneer road-house. The Georgetown road is now but seldom used, excepting by cattlemen taking their herds in late summer to alpine

pasture lands, and in many places it was covered by rank overgrowth and marked, almost everywhere, more or less, by all the sins of wintry storms.

Every mile now brought us nearer to the goal of our journey and we watched eagerly for nests that would indicate how far the aestival season had advanced. We had noted three nests of the Western Robin since leaving Phillips' Station the first at 6500 feet elevation and the others at 5500 feet, all with complements of fresh eggs; but as the nesting of this bird is so irregular and extends through such a long season it afforded but a poor index to seasonal conditions.

Our first nest on the Georgetown Road I found at 5800 feet, and was of the Blue-fronted Jay, six feet up in a black oak with four half fledged young. The second, at 6250 feet, was a Slender-billed Nuthatch's, in a cavity of a dead tree but two feet above the ground, with five callow young. Heinemann, at 6500 feet, found the third nest, one of the Yellow Warbler, in a bush by the roadside with four fresh eggs. These three nests seemed to indicate that, when the 7500 foot level was reached, conditions would be what we had calculated upon finding.

The road, which had continued winding and steep, now made a wide, final curve around the mountain side and landed us upon the edge of the Pyramid Peak Plateau, a region of vast forests and endless, wide, deep cañons. Where the precipitous character of the country did not cause the streams to descend in foaming cataracts or roaring, vapory waterfalls, limpid and swift they sped through the forests or peacefully wandered through fertile, boggy meadow lands, occasionally emptying into or emerging from some glassy lake of that wild, picturesque beauty which only high altitudes can bestow.

It was now not long before the road forked, one branch leading north to Wright's Lake and Moratini's, and the other east to the Forni Meadow and Pyramid Peak. The first find on the Forni branch was by Littlejohn, a newly built nest of the Green-tailed Towhee which was placed a few feet up in a thorny ceanothus by the roadside. The road kept steadily, although very gradually, ascending towards the base of Pyramid Peak, the direction, east, being directly opposite to what we had been travelling in order to reach the Plateau. About us, the budding willows, the fresh green grass and bright flowers of the meadow tracts showed the region to be still in its vernal season. Soon scattered patches of snow, fast melting in the warm sun, lay on the road, and as we proceeded they grew larger and larger until soon the road was lost beneath them. I endeavored to trace the road from the occasional glimpses where it emerged at times, while to Littlejohn and Heineman was given the equally difficult task of piloting "Jim" with his 163-pound load over, or rather through, them; for now, in the late afternoon, the snow was very soft. At times, when the burro floundered about the great drifts, it seemed as if he could scarcely continue unless the load be taken off. Where possible, however, we made wide detours to avoid the deeper drifts and, where drifts hemmed us in, we tamped a narrow path through them which the sapient pack-burro was quick to take advantage of.

At one place I came upon a fir stump with a likely looking cavity and on tapping it and hearing the sibilant note of the Mountain Chickadee I decided to investigate further. The decayed wood yielded quickly to a sharp hand-ax and a set of seven eggs, slightly incubated, soon lay revealed on a thick bed of fur. Scarcely a quarter of a mile farther on I found another cavity in a fir stump from which as I chopped the hissing of the chickadee within gave notice of its being occupied. The nest held eight eggs in the same condition as the first set: both were of the unmarked type. The snow about the stump varied from three

to four feet in depth. The investigation of these nests did not cause us any delay as our burro required frequent rest; but as it was now dusk these were made very short as we were anxious to make Forni's before nightfall.

In the cooler atmosphere the snow was now becoming more firm and fortunately, too, somewhat scattered, allowing us to go along at a rather lively pace. A short distance from the nest of the chickadee I caught sight of two Pine Grosbeaks on an upper limb of a lofty red fir by the road. We could see that one of the birds, fluttering with outstretched wings and open bill, was being fed by the other which appeared, in the fading light, to be a red-plumaged male. We watched the birds with disappointment, for it now seemed apparent that the early breeding record by Coues of another race in Colorado was very likely to apply to the Californian race as well. But soon we witnessed a rather remarkable



Fig. 72. FEMALE CALIFORNIA PINE GROSBEEK AS SHE APPROACHED NEST; PHOTO TAKEN 35 FEET ABOVE THE GROUND; THE DENSITY OF THE FOLIAGE AND CONSEQUENT SHADOWS PREVENTED THE BEST RESULTS PHOTOGRAPHICALLY

change in the actions of the birds, for they began billing and cooing and all our calculations about hornotines and an early nesting season were cast aside. Excitement ran high, for it seemed more than probable that the birds were nesting, or about to nest, in this very vicinity. Further search was prevented now, however, by approaching darkness.

Although Forni's was yet miles farther on, night close at hand, the road snow-covered and hard to follow, and the burro completely tired out, we proceeded on our way jubilantly, for at last it seemed success was within our reach. Nine feet up, from a hole in a dead fir along the road, I flushed a White-headed Woodpecker, but I did not climb to it. Swift running streams now became numerous; it was necessary to ford these as the bridges had all rotted or washed away. "Jim", unlike most "Nevada Mockingbirds", showed no particular aversion to the

water and plunged across them gallantly. In fact, on one occasion he elected to take a rest in mid-stream much to our surprise and discomfiture.

When within about a mile of Forni's I relieved Heinemann of leading the burro while our official photographer and Littlejohn hurried on to the cabins to prepare the evening meal. Being fairly well acquainted with the locality and finding the road, which now headed across a boggy meadow and around a swampy shallow lake, almost impassable, I struck out over a heavily timbered ridge. After some trying experiences I finally reached the cabins at a quarter to eight.

Here our fagged-out burro was given shelter in a log barn which we found well stocked with hay. With this and with the addition of oats, a delicacy held in high favor by all "Sage-brush Canaries", of which we carried a 25 pound sack, our song-bird fared well. Within, the alpine dwelling was soon made cheerful by the light of lamps and candles. With the crackling of a fire and the grateful odor arising from steaming viands all the hardships of the day were soon half forgotten.

As the photo shows (fig. 62), Forni's is situated at the head of a long, glacial meadow at the base of Pyramid Peak. Almost at our cabin door and fed by the snows of Pyramid flowed a merry little brook that furnished us with crystal liquid during the day and sang us to sleep with its pleasant hum at night.

The first day afield in any region is ever the most enjoyable; and with much expectant enthusiasm, boyish if you will, we arose early next morning and were soon abroad in the pleasant, crispy, sunny atmosphere. As we journeyed down the meadow, retracing our steps of the night before, we saw Red-breasted Nuthatches, California Creepers, Mountain Chickadees and Sierra Juncos, some of which were engaged in nest building, and as the nest of the White-headed Woodpecker I had located the night before was found to contain five almost fresh eggs, we rather hurriedly and feverishly endeavored to cover the miles that lay between us, and where the Pine Grosbeaks had been previously seen. Several miles before we came to that now historic spot I came upon another pair billing on the limb of a lodge-pole or tamarack pine. I immediately gave the pre-arranged signal call and Heinemann and Littlejohn joining me the birds were observed from three different points at once. After some time, however, the pair flew away to a far-off hillside where all track of them was lost. Neither were we able to find any trace of the pair seen the previous night although we spent considerable time in the vicinity.

We lunched nearby at the edge of a hill-top clearing which gave a rare view of the surrounding mountains. Here I spied an Audubon Warbler engaged in building a nest on the perilous end of a long, drooping, fir branch 75 feet up. As we viewed the nest we all echoed the hope that even with the loss of an opportunity to try our various paraphernalia, we much preferred that any nest of the Pine Grosbeak found would be in a more accessible situation.

On the way back, on reaching the Forni meadow, Heinemann and Littlejohn went on to camp while I continued to spend some further time afield working the section that lies southeast of the meadow. Here I came upon a male Pine Grosbeak singing in a fir top, and later a pair which, engaged in preening their feathers, I watched for nearly two hours. I felt sure I was unseen by the birds so stealthily had I approached, and when they took flight I was reasonably certain it was the flight of birds who were still roaming about with no particular interest as yet in any fixed locality. On this and succeeding days in our search for a

home of the Pine Grosbeak we found some very interesting nests with eggs including such rarities as the Lincoln Sparrow and Green-tailed Towhee, which I hope to describe at some future time.

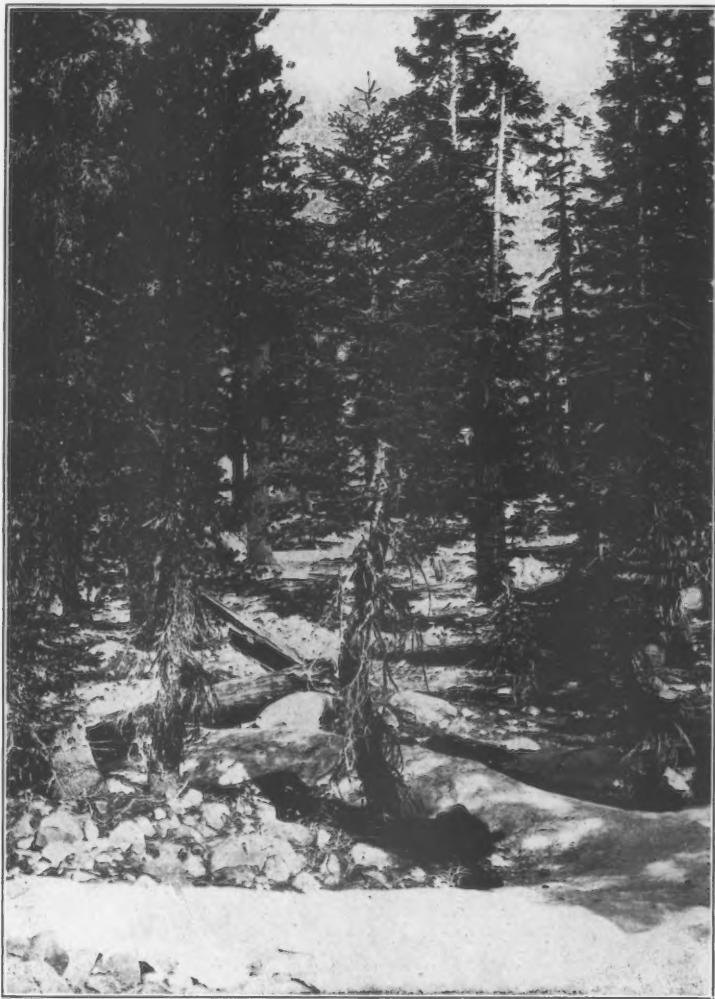


Fig. 73. FIR (AT NEAR CENTER) IN WHICH THE FIRST NEST OF THE CALIFORNIA PINE GROSBEEK WAS FOUND; SCATTERED PATCHES OF SNOW WERE STILL ON THE GROUND BENEATH THE TREES AT THIS DATE, JUNE 15, 1912

As the day's work, which had been done between 7250 and 8000 feet altitude, had been without result, as far as tangible Grosbeak-nesting evidence was concerned, we decided the following day to go to the limit of the timber which is at

about 9250 feet elevation. We started the ascent early and long before noon we were in a snowy region of an intense dazzling whiteness. From the snow which everywhere covered the ground came a peculiar white light as from myriad tiny suns, and which made the region seem more like fairyland than earth. In this snow country except for noisy Nutcrackers birds were few, an occasional Mountain Chickadee, Mountain Bluebird, Sierra Junco or Western Robin being all that were noted. Notwithstanding this scarcity, however, we put in half the day scanning the trees with the forlorn hope that one might contain one of those shallow platforms of twigs and rootlets, peculiar to the family of grosbeaks, which our mind's eye had often pictured.

At 8500 feet altitude, where a roaring, torrent billowed over rocks and boulders and through high drifts of snow, we stopped for luncheon to compare notes. To all it appeared necessary that the very next bird be secured for purposes of dissection. We now followed the waterway for some little time when, as it started a very rapid descent, I who happened to be leading, crossed to the south bank. Littlejohn, interested in the distant movements of a Williamson Sapsucker, crossed also and coming later to a fork we continued southwesterly. It was now a little after one o'clock and the three of us, about fifty yards apart, were rounding a very rocky hillside at the foot of which a shallow, placid lake glittered in the sunlight. Hearing the distant song of a Pine Grosbeak I drew nearer and soon saw the bird at the top of a fir about 200 feet high. Seldom if ever have I heard a more beautiful song than that which floated out from the top of the tall, massive fir and the effect of which the wild surroundings did much to accentuate. The day was calm and still; that almost deathly silence peculiar to high altitudes remained unbroken save for the distant roar of angry snowstreams.

The song of the California Pine Grosbeak does not, I think, bear so much resemblance to that of *Carpodacus cassinii* (which Price has compared it with) as it does to that of the Black-headed Grosbeak. However, as it is so much more varied, melodious and rich than that of the Black-headed Grosbeak, the comparison merely serves to give a general idea of its style. The song consists of a series of trills, warblings and mellow, flute-like notes that must be heard to be appreciated. The bird as a songster ranks easily with the best of Sierran vocalists like the Ruby-crowned Kinglet, Water Ouzel and Sierra Hermit Thrush. Unlike the Western Robin which, perched on some tree top, will sing through almost the entire day, the Pine Grosbeak is not a persistent singer and only on rare occasions have I been given the opportunity of hearing its song.

As I rounded the tree the bird left its lofty perch and, alighting in a low fir nearby, began a peculiar melodious twittering which unfortunately at that time I did not know the meaning of. Although I disliked very much to shoot any Pine Grosbeak, and this one in particular, I remembered our previous agreement and called Littlejohn to the spot. He succeeded in only slightly wounding it, however, for when it struck the ground, it was apparent that the bird was still very much alive. To add to the excitement of the occasion, as Littlejohn shot, another Pine Grosbeak with heavy, startled flight fluttered out from an adjacent fir. As our wounded bird was racing away we had no time to investigate this, but started in pursuit. After catching the disabled bird we returned to where the second bird had flown from.

Littlejohn was slightly in the lead and when he reached the tree there, sure enough, on an open, outer branch in plain view, but sixteen feet up, was the



nest. To our joyful amazement, too, we noted the tail of a sitting bird projecting over the edge of the nest, it being evident that the bird had returned after but a very short interval. I do not believe I ever reached a nest more speedily, but

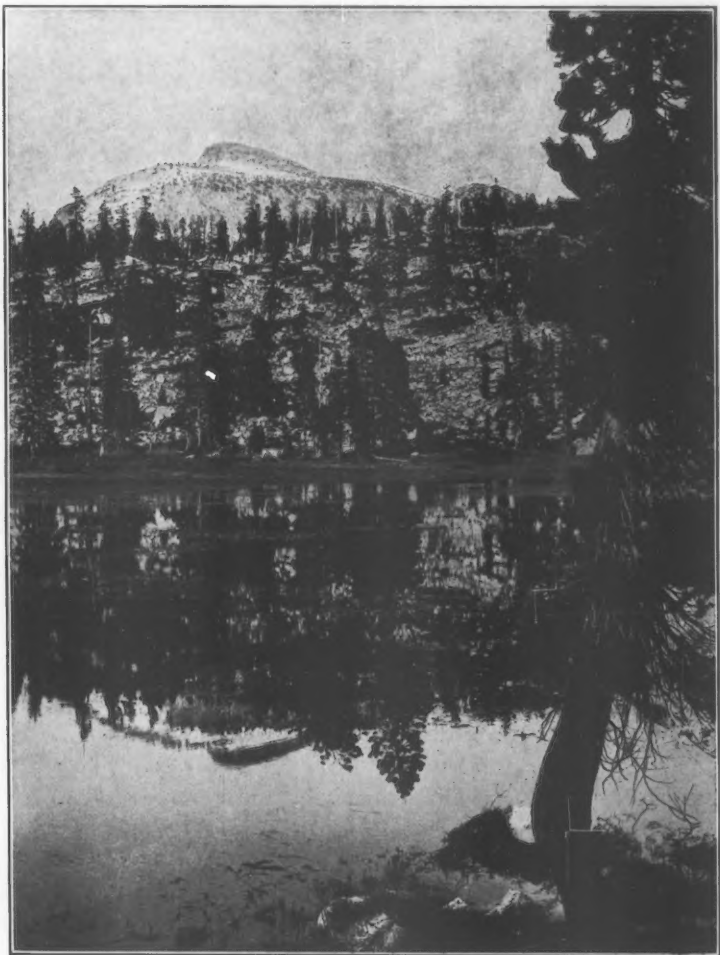


Fig. 74. VIEW TAKEN A SHORT DISTANCE FROM THE CALIFORNIA PINE GROSBREAK'S NEST, SHOWING CHARACTER OF THE COUNTRY IN THE BIRD'S SUMMER HOME; PYRAMID PEAK IS THE MOUNTAIN RISING IN THE BACKGROUND; DATE JUNE 19, 1912; ALTITUDE 8000 FEET

when I came within arm's reach the bird was so reluctant to leave that I could not refrain from pausing for a few moments to observe at such close range this *rara avis*, almost concolored except for the fulvescent plumage of the head and

neck. After gentle urging the bird was induced to leave, disclosing in a frail rootlet nest a single dark maculate egg with a rich blue ground—the imparting of which information brought prolonged cheers from below. The find was made at exactly 1:15 P. M. On account of being an incomplete clutch it was deemed advisable that I hastily descend, that a conference might be held. As we retired from the spot we were glad to see the bird shortly after come back to the nest. Littlejohn soon dissected the bird shot which, although having the yellow plumage of the female, proved to be an adult male. That a bird in this plumage was an adult in full song, and breeding, was proved. I believe this will be found to apply to the whole genus as well, that birds in this yellow phase of plumage are not necessarily immature as has been suspected.

It was now apparent, and to our great disappointment, that as we had unfortunately shot the male parent, the chances of obtaining a complete set of eggs were rather remote. Littlejohn felt sure, however, that the bird would soon lay one or more eggs at least, from the fact that she was sitting so close on the "single." It was for this reason we decided to return to the nest again a few hours later when, if the nest still contained but the single egg, we intended substituting one of the Western Robin marked with pencil spots in imitation of the Pine Grosbeak's. We determined on this course as we felt there was a great possibility now of the bird deserting and the egg being destroyed by the bird herself or other agencies.

On our return to the nest at half past three the bird was setting, but when flushed only the single egg was in the nest. This was taken and the substitution made, as previously planned. As before, the bird returned to the nest shortly after we left. Some distance away the collecting case was opened and the egg, a very richly marked specimen, was shown to the expectant eyes of Heinemann and Littlejohn. The following morning we made an early visit to the nest again, but although the bird was still sitting, only the substituted egg was in the nest.

The afternoon was spent in new territory southeast of Forni's. Here I came, at 7250 feet altitude, upon a male Pine Grosbeak in a low fir which we watched very closely, and when it flew away every tree in the neighborhood was inspected narrowly but without result. Returning I ran across a pair of birds near the lake shown in the picture (see fig. 74). After following them for some time over a rough country interspersed with snow-drifts, bog, boulders and snow-streams we found ourselves on a ridge near camp and our Pine Grosbeaks nowhere in sight.

On June 17 another early morning trip was taken to the original Grosbeak's nest. Approaching I noticed the bird absent but, to my great satisfaction, on climbing the tree I found a second egg had been laid which as before was replaced with one of the Robin. Both eggs in the nest were cold.

Returning to camp we were joined by Heinemann, and the ascent was made of Pyramid Peak, Littlejohn desiring to secure a specimen or so of the *Leucosticte*, Heinemann some photographic views, and I to study the topography of certain sections in the region, the summit of Pyramid affording an unequalled opportunity in this respect. On the trip, at 9250 feet, a nest of the Sierra Junco, remarkable for its elevation, was found with four eggs. In all, but half a dozen *Leucostictes* were seen and none secured. During the day we ranged between 7500 and 10,020 feet elevation, but no Pine Grosbeaks were encountered.

The following day (June 18) Littlejohn and I returned a second time to





Fig. 75. NEST AND EGGS OF THE CALIFORNIA PINE GROSBREAK IN PLACE; THE CAMERA DIRECTLY ABOVE, AND TWIGS SHOWING ON SNOW 16 FEET BENEATH THE NEST; TYPE SET.

the locality where on June 13 we had seen the first birds on the Plateau. Here, in passing along the edge of deep snow-drifts which lay everywhere through the woods, Littlejohn came upon a female *Pinicola* feeding on the snow, while a brilliant red-plumaged male was flitting among the boughs above. In endeavoring to secure the latter the female was seen to fly to a nearby tree where she began hopping from branch to branch until a height of about 25 feet had been attained whereupon she flew to, and disappeared in, the thick foliage of a hemlock bough. Advancing nearer, Littlejohn could just discern the tail of the bird projecting over what might be a nest and which on my climbing the tree proved so to be. Being situated eight feet out near the end of the limb, and in a thick patch of foliage, it could not be seen from above except by spreading the branches apart. On doing this and after the sitting bird had been urged off with a long stick the nest was seen to contain three eggs. Being unable, without equipment, to do anything further, we started back to camp, Littlejohn and Heinemann going direct while I headed over the ridge to our first nest. Here, although the bird was seen nearby, the nest contained no further eggs.

On the following morning we returned, with Heinemann, to the second Grosbeak's nest with carpenter tools and sufficient boards to build a rough platform up in the hemlock, which would serve in securing the eggs as well as photographs of the birds. After the writer had climbed the tree, and the tools and lumber were hauled up, a strong though rough platform was built; and to show how remarkably close Pine Grosbeaks sit I may add that the bird remained on the nest during the entire time, nor did she flush even when the edge of the staging was placed and nailed but a few feet from her.

Heinemann came up next and being somewhat unaccustomed to tree climbing was aided by a rope around the waist. His photographic apparatus was now brought up and preparations made to secure pictures of the bird. These could be taken only as the birds approached the nest; for when sitting on the latter, she was almost invisible. Never have I seen any bird so persistently return to a nest as the Pine Grosbeak did; for no matter how often she was driven off she continued to immediately fly back, and often so quickly that we had no opportunity to get her on the plate. Owing to deep shade in the forest we soon realized that we could scarcely hope for the best results photographically. Considerable snow lay beneath the trees, but being in the shade and as we, too, were 35 feet above, its effect was not perceptible.

When flushed the bird almost invariably flew across to one of the nearby firs and pausing but a moment immediately returned. As our only opportunity for pictures lay in getting the bird in a certain position, and as she frequently lit close to a dark fir trunk or against the light it was necessary in all to flush the bird forty-one times. No photographer could wish for a more willing subject, for she promptly returned on each occasion. The bird was utterly fearless, coming at times very close to us and seeming rather puzzled than alarmed or angered by our aggressive operations. Once a Mountain Chickadee and at another time a Sierra Junco came near the nest-tree, and the female being off on both occasions, she joined her mate in driving them away. Another time, however, when a Western Robin lit close to the nest the birds showed no concern whatever.

The pictures shown were taken when the bird lit in a fir close by, the best being secured when the Grosbeak was on the extremity of a long branch in a rather open situation. The male only put in his appearance at intervals, and

while occasionally approaching quite close never came within arm's length as did the female. Sometimes the latter would hover directly over the nest melodiously twittering. Neither bird made any attempt to resent our intrusion as birds of a more combative temperament like the Brewer Blackbird or Olive-sided Flycatcher would have been apt to do; in fact, they were of a remarkably gentle and affectionate disposition, and a number of times the pair were noticed billing which shows this habit is not necessarily confined to the time of courtship.

The call-note of the Pine Grosbeak, and we surely had an unequalled opportunity for hearing it, is a two-syllabled call bearing some slight resemblance to the words "all-right". Although Chester Barlow has stated that it is a "harsh call-note like that of the Louisiana Tanager", we cannot agree with him. In the first place, "churtig", the call of the Tanager is not itself particularly unmusical and in the second place the call note of the Pine Grosbeak is much more melodious being peculiarly clear and liquid. It is of an earnest, pleasing, mel-



Fig. 76. ANOTHER POSE OF THE FEMALE CALIFORNIA PINE GROSBEAK NEAR NESTING-SITE

low character and directly opposite to "harsh" which the dictionary defines as "rough to the ear, grating, discordant and jarring". It will also be remembered that Mr. Price, in his notes, states that "the call is not loud nor harsh like that of the Western Evening Grosbeak."

As this was the identical place where we had seen two Pine Grosbeaks the evening we reached the Plateau we felt sure that these were the same pair of birds. At both nests observation showed that incubation was being done entirely by the female. In no instance was the latter fed on the nest but in some nearby tree. At other times the bird was seen foraging by herself, the bird's food being always so readily available that it was unnecessary for her to remain off the nest but for a very short period. We had visited this same locality several days before but on that occasion as the male was away and the female sitting close on an almost invisible nest, the Pine Grosbeak and her home escaped our notice.

After the photographic work was over, the nest and eggs with the parent

birds were collected. The eggs showed at least eight days incubation and they had lost, as is usual with most well-incubated eggs, a certain glossiness of shell and freshness of ground-color.

Leaving my companions to continue on to camp I journeyed over the ridges to Grosbeak nest number one. There, while a third egg was collected, the nest was undoubtedly deserted, for the lining was partially torn up, the eggs stone cold and the parent bird nowhere in sight. It being early in the afternoon I still had sufficient time to make camp and come back with Heinemann who took several photographs of the nest and eggs *in situ*. Measurement showed the nest to be sixteen feet above the ground, four feet out from the trunk and twenty-one inches from the tip of the branch. The red fir in which it was placed was on a sloping mountain side where the rather scattered timber rose

amid huge boulders, fallen trees and fast melting banks of snow, some of which may be seen below the nest in the photograph (fig. 73).

The nest was simply a rough platform of twigs, principally fir, and was thickly lined with very fine light-colored grasses. So thick is this grass lining that eggs in the nest were not visible from below. The twig platform measures 6x8 inches, the grass nest cavity,  $5 \times 4\frac{1}{2} \times 1\frac{1}{4}$  inches deep. With the exception of some eggs of the *Raptore*s, perhaps, there are but few eggs to be found in California that are as richly colored. In describing their coloration I have used Ridgway's *Nomenclature of Colors*, 1886. In Ridgway's book, however, the paint on the plates has been unevenly



Fig. 77. FEMALE CALIFORNIA PINK GROSBEEK APPROACHING NEST; PHOTOGRAPHED 35 FEET ABOVE THE GROUND

applied with the result that the color of nearly every individual plate varies more or less in intensity making an *exact* comparison difficult.

The ground color of the eggs approaches closely to Nile Blue (no. 17, Plate ix), but is slightly deeper and more rich in shade. The surface markings are spots and blotches, chiefly around the larger end, and in the form of a rough wreath, of black and of a rich deep brown called Vandyke (no. 5, Plate iii). There are underlying scattered spots of Wood Brown (no. 19, Plate iii), and splashy shell markings of Olive Gray (no. 14, Plate ii). The eggs are ovate in shape and measure as they lie in the picture  $1.02 \times .69$ ,  $1.02 \times .67$ , and  $.98 \times .71$  (see fig. 78).

The second nest was situated 35 feet up, eight feet from the trunk of the hemlock, and two feet from the end of the limb. It closely resembles the type

nest in construction, having a flimsy platform of small dead hemlock twigs from three to eight inches long, intermixed with a few stems of some tough wire-like shrub. On this platform rested the nest proper, of fine light-colored grasses. The whole structure is in no way fastened to the branch but simply rests on several twigs. Altho the nest can be easily seen through, in the tree it was entirely hidden, from above by the thick green foliage which hung over it only two inches away, and from below in like manner. The main branch on which the nest rests is well covered with the bright yellow moss peculiar to most trees in these altitudes. The nest measures eight inches over all, and the grassy interior is  $3\frac{1}{4} \times 3\frac{1}{4} \times 1\frac{1}{4}$  inches deep.

The second set of eggs is similar to the type set except that they rather approach elongate-ovate in shape, the ground color is slightly paler and duller, and the markings lighter and less scattered, except on one specimen where they are

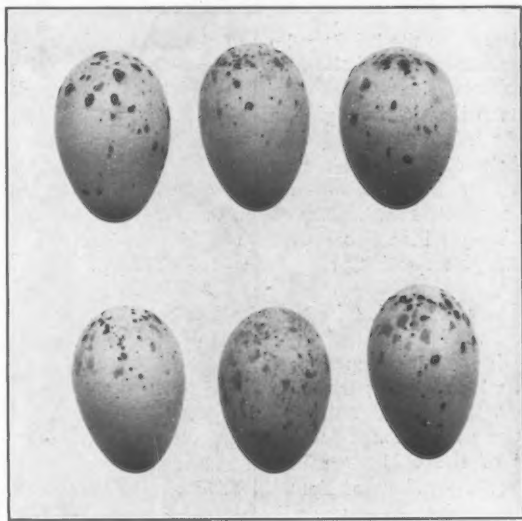


Fig. 78. EGGS OF THE CALIFORNIA PINE GROSBK; UPPER ROW TYPE SET, LOWER ROW SECOND SET; EXACTLY NATURAL SIZE

finely distributed over the entire surface. In the position shown (fig. 78) they measure in inches 1.02x.68, 1.00x.68, and 1.06x.68.

It may be of some interest to compare the rarity and difficulty of securing the type set of eggs of the Gray-crowned Leucosticte, or Rosy Finch, with that of the California Pine Grosbeak. The former, although inhabiting a region more difficult to reach, can usually be relied upon being found in certain localities. The Pine Grosbeak on the other hand is extremely erratic in its distribution. The habitat of the Rosy Finch along the timberless Sierran Crest is open while that of its neighbor just below is in the dense forests of a great woodland. While we saw several Rosy Finches engaged in nest building in our search of 1910 we were only able to definitely locate and reach but a single nest. On the other hand both nests of the Pine Grosbeak, while difficult to locate, were easily acces-

sible. The Rosy Finch is distributed over a wide range of country, the Pine Grosbeak over a very restricted area. The eggs of the rupicoline Rosy Finch defied a small army of searchers for 79 years; those of the arboreal Grosbeak, but a small fraction of that number, for 49 summers. From this comparison all can draw their own conclusions as to the relative rarity and to the comparative difficulty of securing the respective first sets.

The following description of the male Pine Grosbeak collected with the type set serves to show how birds in this "yellow" phase of plumage are almost, if not entirely, indistinguishable from the females in coloration: General color of body plain gray; wings and tail somewhat darker. Most of the wing feathers, both quill feathers and coverts, edged with whitish. Tail feathers edged with the same grayish shade as the body color. Top of head and cheeks coppery yellowish, this color extending in disconnected spots onto the dorsum. A small spot of the same yellowish color on the rump.

While the rich poppy red plumage of the male California Pine Grosbeak is not so conspicuous as the bright yellow of the Louisiana Tanager or Western Evening Grosbeak, it is, nevertheless, one of the most beautiful of all Sierran birds. Campers, tourists and summer residents often described the Tanager, which is a common bird in the region, asking us its identity; and sometimes, too, the Evening Grosbeak had attracted their attention. But when we, in turn, gave a description of the Pine Grosbeak scarcely anybody ever recollected seeing such a bird, and when they did we soon found they were confusing it with the very abundant Cassin Purple Finch. The resemblance to this bird is, however, only slight. The California Pine Grosbeak, both in form and flight is a rather graceful bird, for although somewhat plump in build this is equalized by the long wings and tail.

Although Price states that he saw the Pine Grosbeak usually in company with the Cassin Purple Finch and the Western Evening Grosbeak it may be of interest to note how widely experience may differ, for on no occasion have we ever seen the bird associating with any other species.

On June 20, the day after the two sets of eggs were collected, Littlejohn desiring to secure a Rosy Finch before leaving and I to investigate the nidological possibilities of the wild woodland that surrounded a certain alpine lake, started up the southeast slope of Pyramid Peak. As we ascended, we could see approaching from the west a lofty wall of huge, brownish, storm clouds extending north and south as far as the eye could reach. From previous experience in these altitudes we needed no barometer to tell us that a great storm was approaching, and curtailing our trip afield as much as possible we returned to camp several hours before noon. Under the circumstances, the principal work of the trip having been accomplished, hasty preparations were made for an immediate departure; for already the sky was clouding and a gusty wind wailing along the meadows. During our absence close to the cabins Heinemann saw the last Pine Grosbeak of the year, the eighteenth bird to be recorded.

The following table gives a summary of our season's work afield. Where the same birds were seen on succeeding days their occurrence is not recorded. Although Heinemann heretofore has not engaged in ornithological work afield I have counted his mileage on the present trip, as he made it a point to familiarize himself with the Grosbeaks both by sight and song.

Leaving Forni's at 2:40 P. M. we took a very direct trail down precipitous mountain sides to Echo which we reached at 5:40 P. M., and later Phillips' at



7:15 P. M. Here the following morning, the weather clearing somewhat, we spent the forenoon in the field, recording some interesting notes on *Melospiza lincolni* and other birds. The trip ended at Bijou which was reached at dusk.

TABLE SUMMARIZING SEASON'S EXPERIENCE WITH THE CALIFORNIA PINE GROSBK

DATE	BIRDS	FOUND BY	LOCALITY COVERED	ELEV. COVER'D	MIL'GE for ALL
June 11	1	Ray	Deerington's	7000 to 7600	20
" 12	3	All	Phillips'	7250 to 6900	3
" 12	1	Littlejohn	Deerington's	6900 to 7250	7
" 13	2	Ray	Pyramid Peak Plateau	7000 to 7600	24
" 14	5	"	" " "	7250 to 8000	28
" 15	2	"	Slope of Pyramid Peak	7500 to 9250	45
" 16	1	"	Pyramid Peak Plateau	7000 to 7600	40
" 16	2	"	" " "	7250 to 7600	5
" 17	0	—	Plateau and Peak	7500 to 10,200	30
" 18	0	—	Pyramid Peak Plateau	7250 to 7600	20
" 19	0	—	" " "	7250 to 8500	45
" 20	1	Heinemann	Plateau and Peak	7000 to 8500	25
" 21	0	—	Phillips'	7000 to 7600	20
Total Birds				Total Mileage	
18				312	

Next morning a wild snow-storm broke over the whole region, lasting three days and draping valleys and mountains in a wintry mantle. Littlejohn and Heinemann fled away to lower altitudes while I, lounging before the pleasant log fire in the Bijou Post Office, whiled away the time reading Whittier's "Snow Bound", while the storm raged without. At times, when the clouds lifted, I could see Pyramid Peak far distant and snowy, and I thought, with no regret, of the dreary prospect doubtless now in view from the windows of the Forni cabins.

## NOTES FROM TODOS SANTOS ISLANDS

By A. B. HOWELL

TODOS SANTOS consists of two main islands a hundred yards apart. The southernmost one is the larger, being a mile and a quarter long, half a mile wide, and three hundred and thirteen feet high, while the one towards the north is but half a mile long, a quarter of a mile wide, and fifty-five feet high. They are surrounded by numerous small outlying rocks and beds of kelp, and are in general similar to the smaller islands off the southern California coast, being almost barren of vegetation. They are opposite Ensenada Bay, and although but three miles from Banda Point, a narrow rocky headland jutting out to sea, they are some ten miles from the general coastline. Because of their proximity to the mainland, one would not expect to find a large variety of unusual stragglers which have become lost in migration, as is the case on the Farallones for instance, and the avian visitors seem to consist of prosaic migrants that are to be found in abundance farther north.

My visit to the islands was from April 15 to 20, 1910, too short a time to be able to record a long list of species, but some few interesting things were noted.

As far as I could discover there were no cats or foxes on the islands, and the rats can increase and multiply almost indefinitely. The place is alive with them,

and still more so with fleas, making a stay in the locality a perfect nightmare. One has but to stand still for a moment and upon looking down, dozens of the little pests are to be seen crawling up one's legs.

A number of Cassin Auklets (*Ptychoramphus aleuticus*) and a specimen each of Xantus Murrelet (*Brachyramphus hypoleucus*) and Black Petrel (*Oceanodroma melania*) were seen on the way from Ensenada. I searched diligently for nests of the two former species, and was convinced at the time that no small seabirds bred upon the islands because of the plague of rats, but on April 25, 1912, Mr. George Willett found several nests of Cassin Auklets, which proved that they do breed there in limited numbers.

**Larus occidentalis.** Western Gull. These had finished the construction of their nests in several small, well-defined colonies, and were jealously guarding them, either singly or in pairs, from the thievery of their neighbors, but no eggs had been laid when I left.

**Larus heermanni.** Heermann Gull. A few seen.

**Sterna maxima.** Royal Tern. Two noted.

**Puffinus griseus.** Sooty Shearwater. As we were steaming past the islands down the coast April 12, vast flocks of what I took to be this species were seen flying half a mile out to sea.

**Phalacrocorax auritus albociliatus.** Farallon Cormorant. Nests of this bird and the pelican were commingled in two colonies on the south island. Only a very few birds visited the rookery during the first two days of my stay, but by the last day flocks of them were coming in from the sea, and standing about the old nests; and an individual could occasionally be seen carrying seaweed.

**Phalacrocorax penicillatus.** Brandt Cormorant. Many old nests were located in the niches of the low cliff along the shore, and the birds were common on the surf-washed rocks, but they showed no signs of breeding yet. On a rock twenty miles farther south some of these birds had eggs.

**Pelecanus californicus.** California Brown Pelican. A few of these also were to be found inspecting the old nests, but here at least no eggs had been deposited. On the farther end of the north island, however, there was a very large colony, as could be seen by the birds in the air. The fishermen informed me that the pelicans had eggs there at this date. I wish to describe here the actions of a flock of these birds, evidently from Todos Santos, which I witnessed April 13 some fifteen miles down the coast. I saw the same thing several times during 1910, but to a less marked degree. Having done no work on any of the islands during the fall I am unable to state whether this is a form of nuptial or courtship flight, but should judge this to be the case. At four o'clock I noted a very large flock of pelicans feeding, and shortly afterwards the school of fish which they were pursuing left. Some of the birds settled down upon the water while others began circling in the air on motionless wings. A moderate breeze was blowing. Singly the ones in the water took wing and joined the circling throng until there must have been a hundred and fifty birds in the air, forming an irregular but clearly defined column or rather cylinder, some hundred yards in diameter. Gradually some birds mounted higher until they were specks in the sky, while others were but fifty yards above the water. More than an hour elapsed between the start and finish of this flight. The flock remained over almost the same spot, and at no time did a bird show indications of diving or looking for fish. Their soaring was very even, and I noticed no flapping at



all after a bird was fairly launched. Slowly, as darkness approached, the pelicans left towards the north, singly or in twos and threes.

**Heteractitis incanus.** Wandering Tattler. Lone birds were rather common.

**Arenaria melanocephala.** Black Turnstone. Present in small flocks.

**Haematopus frazari.** Frazar Oystercatcher. Rather common and found usually together with the following in small flocks of from two to six individuals.

**Haematopus bachmani.** Black Oystercatcher. Outnumbering the last about two to one. April 13 I met one of these birds flying north some six miles from the coast.

**Haliaeetus leucocephalus.** There was a nest of this species, as there has been for a great many years, part way up a cliff with very much of an overhang at the top. As far as I can ascertain no one has ever been able to see the inside of this nest. It probably contained eggs at this date, but I was told that a taxidermist who had visited the islands the week before had killed one bird and wounded the other.

**Falco peregrinus anatum.** Duck Hawk. The resident pair did not seem to hunt in the immediate vicinity, but when foraging for food one would start out over the sea towards the northeast and be away about an hour and a half before returning with what I took to be a Cassin Auklet. This fact is another indication that no small pelagic birds breed here, for if such had been the case, the falcons would have done more patient waiting on the commanding promontories, as I have seen them do in other localities where the auklets breed. I found the nest of this pair April 16, situated on a "sugar loaf" three hundred feet above the sea. The four eggs, incubated two thirds, were placed in a small hollow formed by the birds, in the soil of a deep ledge, with no protection from above. The ascent was not by any means easy but was negotiated without the aid of a rope. This was the most graceful and fearless pair of Duck Hawks that I have ever seen. They paid not the slightest attention to me, in plain view below the nest, but when I approached with evil intent began tactics that made me thankful for my hat. Although they actually only brushed my head with their wings, this was enough, as both hands and feet were occupied in climbing. I watched one bird return to the nest with food on several occasions, and each time its mate flew to meet it with a great outcry, turning belly upwards in mid-flight to receive the food, too lightly and gracefully for description. Twice she let the morsel drop, purposely, I am convinced, tumbling and diving after it to recover herself and her meal fifty feet above the water. Again I saw one go headlong into a slow-moving flock of gulls just for the fun of surprising them, only to flee, shrilly screaming in mock fright before a pursuing Larus.

**Pandion haliaetus carolinensis.** Osprey. But one pair of these birds were present, in possession of one of the five old nests. One of the birds was usually to be seen perched on the edge of the nest, but no eggs had as yet been deposited. Intermittently for several weeks preceding and succeeding this time, I was visiting points along the coast from twenty miles above to thirty miles below Ensenada. In all I stopped at fifteen different places, making four round trips, and, in our boat, skirting within a couple of hundred yards of the shore between points. Several dozen old nests were encountered within this territory but not a single bird of this species did I see, with the exception of the above pair. I cannot account for this in any way, for the old nests prove that they were abundant at no distant date, and they are now subject to no more persecution than

ten or even fifty years ago, as most of this stretch of coast is not only uninhabited but almost entirely unvisited.

**Aluco pratincola.** Barn Owl. April 16 I found a nest in a deep cleft of the rocks, twenty feet above the sea, which contained a single nestling two-thirds grown. This site was newly occupied, but on a ledge four feet above the floor of a cave on the higher ground was a nest that must have been used for generations. Beneath it was a pile of refuse and pellets two or three feet high.

**Colaptes cafer collaris.** Red-shafted Flicker. One of these birds was making himself very much at home on the hillsides. As there was no tree or bush higher than four feet upon this island, he seemed rather out of place. Either this bird or another one must have been here the year before, as there was a weather-worn feather in an Osprey's nest that showed no signs of having been repaired recently.

**Phalaenoptilus nuttalli californicus.** Dusky Poorwill. A single bird was flushed twice during the bright part of the day. Not seen or heard at dusk.

**Aëronautes melanoleucus.** White-throated Swift. Along the backbone of the island were a number darting to and fro.

**Calypte anna.** Anna Hummingbird. Several seen.

**Selasphorus rufus.** Rufous Hummingbird. A single *Selasphorus* permitted a close enough view for me to be fairly sure that it was this form.

**Tyrannus verticalis.** Arkansas Kingbird. Two pairs had staked off their claims and were standing guard to keep off intruders. They showed every indication of intending to remain and raise a family in some scrubby brush later on.

**Sayornis nigricans.** Black Phoebe. A pair was seen daily about a rocky strip near the shore.

**Myiochanes richardsoni.** Western Wood Pewee. One of these birds, looking very much out of place, was seen on the eighteenth.

**Corvus corax sinuatus.** Raven. Several of these kept vigilant watch over camp. Occasionally they could be seen surreptitiously sneaking into certain holes along the cliff.

**Carpodacus mexicanus clementis.** San Clemente House Finch. This species presented a rather interesting problem. On the northern end of the south island nesting was far advanced. Only a couple of nests were found containing eggs, these almost on the point of hatching, while perhaps a dozen were found with young in all stages, the oldest of which flew out of the nest when I became too familiar. On the southern end, fresh eggs and incomplete sets were the rule, no young at all being noted. The difference was most pronounced and exactly contrary to what one would be led to expect, for at the northern end the slope was northwest, facing the cold winds and getting the full sweep of the sea fogs, while the other end was sheltered and comparatively warm, facing toward the southeast. The majority of nests were in cholla cactuses, but a few pairs had set up housekeeping in suitable crannies among the rocks.

**Passerculus rostratus.** Large-billed Sparrow. One or two individuals seen. Evidently the rear guard of the general migration.

**Zonotrichia leucophrys gambeli.** Gambel Sparrow. Several birds present.

**Melospiza melodia** subsp. Song Sparrow. The only specimen secured was destroyed by the rats. Song sparrows seem never to have been noted on any of the islands south of Los Coronados. If this bird was a resident, as I believe was the case, it was probably *clementae*, but it may have been a visitor from the mainland.

**Hirundo erythrogastra.** Barn Swallow. Quite a colony seemed to be contemplating settling down for the season in one of the caves along the shore.

**Vermivora celata sordida.** Dusky Warbler. This was the commonest bird on the island but was remarkably wild; so much so that the only way I could get one was on the wing. Owing to the lack of suitable bushes and small trees, they seemed to confine their nesting operations to a vine resembling a clematis, that grows over vegetation a couple of feet high. From a nest in this growth I flushed a bird by almost stepping on it. The four fresh eggs were in a dainty cup built of a silvery lichen that grows on almost everything in sight. The structure was lined with finer pieces of the same sort of lichens, making one of the most beautiful nests I have ever seen. Although I spent many hours tramping all over the island, the birds failed to reveal even the approximate location of another nest.

**Salpinctes obsoletus.** Rock Wren. Two pairs of these birds had selected nesting sites, and were not only anxious to let the whole world know it, but were willing to show the exact spot to anyone interested.

**Sialia mexicana occidentalis.** Western Bluebird. A pair appeared near camp on the nineteenth but were not present afterwards.

#### SOME BIRDS OF THE SAW-TOOTH MOUNTAINS, IDAHO

By STANLEY G. JEWETT

DURING the fall of 1910 I was sent into the Saw-tooth Mountains of Idaho to do some zoological collecting. I arrived at Ketchum on October 24 and left the mountains on December 20, after working at Ketchum in the Wood River Valley, and at the Boston Mine near the source of Rook's Creek. Side trips were made to the sources of Warm Spring and Baker Creeks, up to 9000 feet elevation. Wood River Valley at Ketchum is bordered with groves of aspens and cottonwoods alternating with extended thickets of willow. A few miles above the town the valley closes up to a narrow canyon with steep slopes on either side clothed with a heavy forest of Douglas spruce and Murray pine. In the vicinity of the Boston Mine on Rook's Creek most of the southern slopes are bare of forest trees, but clothed with a thick carpet of grass and sage-brush (*Artemisia tridentata*), while the northern slopes and canyons are well covered by such forest trees as Douglas spruce, Murray pine and lodge pole pine. This entire region is in the Saw-tooth National Forest Reserve, and is used for sheep grazing from July until September. The summer climate is delightful but frosts occur irregularly throughout the year, so no attempt at farming is made. Wood River and all its tributaries are well stocked with trout, and deer, bear and goat are fairly plentiful a few miles back from Ketchum. At the time of my arrival, October 24, most of the summer migrants, both birds and sportsmen, had left for warmer climates so the following list includes only what I believe to be winter residents, with the exception of one Western Robin (*P. m. propinquus*) seen October 27 at Ketchum.

**Anas platyrhynchos.** First seen on November 30; then common during December. Along Wood River several warm springs keep the ice thawed out in small

sloughs, and various water plants remain green throughout the winter. In such of these places as are well sheltered by thickets of willows, Mallards were usually found in flocks of from two or three to a dozen. Coyotes, lynxes and mink prey on these winter birds, and, with the long cold winter, its a wonder any survive.

**Gallinago delicata.** During December several of this species were seen and two taken along Wood River. They keep close to the open spring holes feeding under the overhanging mud banks.

**Dendragapus obscurus richardsoni.** Common throughout this entire range. In Idaho this species nests in the lower foothills, mostly in the open sage-covered areas, and often several miles from the timber. As soon as the young begin to fly they start moving higher up the mountains, and by the time snow comes are all well up on the ridges. During October I flushed several small flocks along Spring Creek at about 6500 feet elevation, but not a single bird could be found there two weeks later. On Boyle Mountain, at 8000 feet, November 5, I saw at least one hundred individuals in a single flock, and during December I found them common on the pine covered ridges at from 7000 to 8000 feet.

**Canachites franklini.** This species is found in the Hudsonian Zone near the head of Wood River and on the higher ridges along Baker Creek. I did not find a single specimen myself but an old trapper, Mr. Zanchie, with whom I hunted in November, has killed several on Baker Creek. Known all over Idaho as "Fcol Hen."

**Accipiter velox.** A single example seen near Ketchum on November 13.

**Buteo swainsoni.** Common throughout all the region I covered. Several were caught in steel traps set for mink along Rook's Creek. On October 31 I flushed one from the thick willows on Spring Creek where it had killed a Richardson Grouse and was in the act of making a meal. A charge of no. 8 shot stopped any more such killings and added another specimen to my list.

**Aquila chrysaetos.** A single bird seen October 29 near Ketchum, hunting rabbits over the sage plains. I saw no more in the mountains but was told that several pairs breed along Spring Creek. I saw a nest on a high cliff on Baker Creek, where Mr. Zanchie, a trapper, told me a pair nested during the summer of 1910.

**Bubo virginianus pallescens.** Fairly common throughout the timbered sections. I heard the call of this species very often during my trip, and one was collected on Wood River November 21.

**Ceryle alcyon.** Several seen along Wood River during November and December. A telephone wire across the river a few miles below Ketchum was a favorite perch for one of these fishermen. I have seen them dive into the icy water when the thermometer registered zero.

**Dryobates villosus monticola.** Common along the various streams in the spruce forests, but not seen in the cottonwoods along Wood River.

**Dryobates pubescens medianus.** Common in the aspen and cottonwood thickets along Wood River, but not seen in the spruce forests anywhere in the mountains.

**Picoides americanus dorsalis.** Only three seen, all in the Hudsonian Zone. One taken November 3 at about 7500 feet.

**Phloeotomus pileatus abieticola.** Fairly common in the forests along Spring Creek. They keep well up on the ridges and are seldom seen in the canyons.

**Pica pica hudsonia.** Common in the mountains about all mines and

camp. At the Boston Mine several Magpies were seen about the hog pen every day. Several were caught in meat-baited traps set for flying squirrels.

**Perisoreus canadensis capitalis.** Not common. One taken November 3 at the hog pen of the Boston Mine, where it had come to steal scraps from the hogs, and one shot on Boyle Mountain, November 5.

**Cyanicitta stelleri annectens.** Several were seen along Rook's Creek, and they were regular visitors to the hog pen at the Boston Mine. None recorded from Wood River Valley.

**Nucifraga columbiana.** Common everywhere throughout the range. Often a dozen were seen during a few hours tramp, both in the spruce timber on the mountains and along Wood River in the cottonwoods. They, in company with the Magpies, were daily visitors to the Boston Mine, feeding on scraps of meat stolen from the hog pen. On November 10 I hid in a thicket of pine on Boyle Mountain and "squeaked" up four Nutcrackers within a few feet of me. They were very anxious to learn where the noise came from, and I kept them around for half an hour before one of them located me; then with harsh cries the four left the neighborhood without a moment's hesitation. Several were caught in meat-baited traps set for flying squirrels and weasels at 8000 feet elevation.

**Pinicola enucleator montana.** First seen November 2, on a high wind swept ridge above Baker Creek; then becoming more common until December 10. During December several were taken in the willow thickets along Wood River at 6000 feet elevation.

**Carpodacus cassini.** Observed several on Spring Creek trail west of Ketchum, October 27.

**Loxia curvirostra minor.** Common in the pine and spruce belt all over the range, where they were feeding on seeds of coniferous trees. Several large flocks were seen on the high ridges above Baker Creek during November.

**Loxia leucoptera.** A single example secured November 6 in company with a large flock of *L. c. minor*, on Rook's Creek at 7000 feet elevation.

**Acanthis linaria linaria.** Only one seen. On November 16, during a heavy snow storm, an adult male of this species came to the camp yard at the Boston Mine and fed about the stables for some time.

**Junco hyemalis connectens.** Common along Spring Creek on October 27. As the snow grew deeper this species moved down Wood River to the vicinity of Hailey, at about 5500 feet elevation.

**Melospiza melodia montana.** Several seen along Wood River in December. They frequent the warm spring flats, and get an abundance of insect food from the muddy ground. Often seen feeding in the shallow water, while on all sides the snow was piled four feet deep.

**Passer domesticus.** A small flock stayed about the stage barn at Ketchum all the time I was there. Mr. Baxter, the hotel-keeper, told me that several were found frozen on his porch during the winter of 1909.

**Bombycilla garrula.** First seen November 9, when, during a thick snow-storm, I took a male on Rook's Creek, at 7000 feet. On November 22 I saw a flock of eighteen in the town of Hailey, on Wood River. They were feeding on dried and frozen apples that were still on the trees.

**Lanius borealis.** A single example seen on Rook's Creek November 13.

**Cinclus mexicanus unicolor.** Common on all the streams throughout the range, a dozen or more staying below the warm springs in Spring Creek during December. Several times as I made my way through the willows on snow-shoes,

muffled to the ears to keep out the biting frost of zero weather, I have heard this little fellow's beautiful ringing song above the roar of the icy waters.

***Certhia familiaris montana*.** A few seen in the pine and spruce belt, but nowise common. One taken on Rook's Creek, 7500 feet, November 3.

***Sitta carolinensis nelsoni*.** Seen occasionally through the Canadian and Hudsonian zones, but not common.

***Sitta canadensis*.** Common wherever spruce and pine timber is found, usually in company with *Penthestes gambeli gambeli*.

***Penthestes atricapillus septentrionalis*.** Common along Wood River in the willow and aspen thickets, but never seen in the coniferous belt.

***Penthestes gambeli gambeli*.** This and the next species were the most common birds in any part of the mountains, outnumbering all other species three to one. On October 31 I was on Boyle Mountain at about 8000 feet elevation, and I spent about an hour with a flock of this species that numbered well over one hundred individuals.

***Regulus satrapa olivaceus*.** Common everywhere in suitable forests. It was a pleasing sight to see these little mites searching the trunk and inner branches of the spruce trees that were laden to the breaking point with snow. They appeared all unmindful of the intense cold.

***Planesticus migratorius propinquus*.** A single individual seen along Spring Creek October 27.

## FROM FIELD AND STUDY

**Breeding of the Band-tailed Pigeon in Marin County, California.**—While never resident, the Band-tailed Pigeon (*Columba f. fasciata*) was formerly intermittently abundant in portions of Marin County, California. Sometimes it appeared in flocks of a hundred or so in the fall or winter when food conditions seemed to attract them, and was usually quite numerous in the spring and summer. The birds would then be in evidence from April to July, and might be seen picking up stray kernels in the fields just planted with forage corn. Or, later, when elder berries were ripe they would come in small flocks and feed in the tops of the elder bushes. It seemed as if they must have bred here in those days, yet with all the deer hunting, range riding and deliberate searching for nests we never had any actual evidence of this, excepting once, when a bird was seen carrying material for a nest into a fir forest, though the nest was not discovered.

This pigeon is becoming scarcer all the time, and, while an occasional small flock is seen in this neighborhood, it never appears in such numbers as it did thirty, or even twenty years ago, and hence it seems singular that the first breeding record for this locality should have been made only this summer, when but few are left in evidence. This record was made purely by accident, the bird having been flushed from its nest when the writer was surveying a line through a forest of second-growth timber on a steep hillside at Lagunitas, near San Geronimo, Marin County, on July 30, 1912.

The nest, of small twigs loosely laid together and closely resembling that of a Mourning Dove, though naturally a little larger, was on an overhanging branch of a California lilac (*Ceanothus thyrsiflorus*) extending over a steep rocky place that was rather more open than the immediate neighborhood. The nest was about eight feet from the ground. The single egg it contained was in an advanced state of incubation, the embryo being probably within three days of breaking the shell.

At times the Band-tailed Pigeon, possibly on account of unfavorable food conditions in its natural haunts, gathers in large flocks in certain localities, and it then falls an easy victim to the hunter. Possibly also there are localities where it breeds in numbers and may easily be shot. Be this as it may, this fine bird is certainly and surely being destroyed faster than it breeds, and it is high time that it should be given some sort of protection, and listed with game birds.—JOSEPH MAILLIARD.

**Some 1912 Spring Notes from Southern California.**—*Mycteria americana*. Wood Ibis. On May 18 I saw a single bird of this species feeding in a small pond within a hun-



dred feet of a house in the outskirts of Los Angeles. I believe this is the earliest recorded date of the occurrence of this species in this section in the spring.

*Zonotrichia leucophrys gambeli*. Gambel Sparrow. Guy C. Rich saw an adult bird of this species at Hollywood, Los Angeles County, May 14.

*Piranga ludoviciana*. Western Tanager. This bird, always more or less irregular in its movements in this locality, has appeared in the coast district of southern California this spring in unusual numbers and remained considerably later than usual. Antonin Jay noted them daily in his garden in Los Angeles from early April until May 17 and saw a single adult male in the same locality as late as May 21. J. E. Law found them plentiful at Hollywood until May 14 and Guy C. Rich saw a pair in the same vicinity May 19. In a Los Angeles daily paper dated May 13, the correspondent from Ventura notes the abundance of the species in Ventura and vicinity.

*Dendroica townsendi*. Townsend Warbler. Unusually plentiful in migration this spring. I found it common near Newport, Orange County, May 12, and Antonin Jay found it plentiful in the willow regions near El Monte, Los Angeles County, as late as May 18.—G. WILLETT.



Fig. 79. NEST AND EGGS OF SCOTT SPARROW; HUACHUCA MOUNTAINS, ARIZONA

**Breeding of the Scott Sparrow.**—The mountains of Cochise County, Arizona, are inhabited by very few species of the sparrow family. The fingers of one hand would number them all.

The Scott Sparrow (*Aimophila ruficeps scotti*) is the most common one found really up in the mountains, aside from the Arizona Junco (*Junco phaeonotus palliatus*). These birds are rarely found above 6800 feet altitude, overlapping the zone occupied by the junco, which extends down to about 5800 feet; and are most common on the scantily covered lower ridges and foothills, where scattering oaks, madrona, and scrubby mountain mahogany are the only trees, together with plenty of bear grass and mescal plants. They much prefer slopes with a southerly exposure.

During May, their scolding notes and poor little song are to be heard constantly, when one is in the right localities. The birds keep pretty well out of sight, but if the observer will sit down and keep quiet, he will hear the leaves rustle and, by watching, presently see one hopping along, in and out among the bunches of grass and dead brush. At such times they may be seen chasing one another about like a pair of Canyon Towhees, uttering a similar chattering note.

Fresh eggs may be looked for after the 20th of May though some pairs breed much earlier. I found one nest containing three newly hatched young May 25. The young did not appear to be over a day or two old, yet I heard them cheeping at a distance of about a rod, and by following the sound, located the nest.

No amount of watching on my part has ever enabled me to locate a nest being built. I have found a number of occupied nests, but it has always been by flushing the bird as I passed close by. The first week of June is the height of the nesting season. The male sings quite continuously in the vicinity of the nest. The latter is built of grass and lined with fine grass, closely resembling the nest of the Arizona Junco, but better built. The eggs are pure white, usually three in number. They are slightly smaller than the eggs of the Junco, and can be distinguished from immaculate specimens of the latter by this difference in size, and by the fact that they show no trace of a blue shading as Juncos' eggs always do.

When flushed from the nest the bird flies silently away, close to the ground, until the shelter of a bush is reached. Then she begins to scold vigorously but does not come back near the nest. When the young begin to fly, both parents are kept busy supplying them with food, which they demand most vociferously. At this time both the adults are very solicitous and set up a terrible scolding if the young are approached at all closely. The nest is carefully concealed under a rock overhung with dead grass, or under the leaves of a mescal plant. The nest, of which a photograph accompanies this article (see fig. 79), was found May 24, 1907, and is typical in every respect. Incubation was advanced.—F. C. WILLARD.

**White-winged Dove in the San Diegoan District.**—I have recently examined a mounted specimen of the White-winged Dove (*Melopelia asiatica trudeaui*) in the possession of Mr. John Johnson, Jr., of Escondido. The bird was shot at a point not over five miles from the Pacific Ocean, at an elevation of about 200 feet. The locality is about ten miles due west from Escondido in an air line.

I am inclined to think that the specimen is a bird-of-the-year, as there is a rusty tinge at the tips of the feathers. It was in company with Mourning Doves, but seemed to feel out of place.

As to the date of capture, Mr. Johnson said it was three weeks before the quail season opened last year (1911). That would bring it about September 25.—JOSEPH DIXON.

**Paroquet Auklet in Humboldt County.**—Buzz-z-z-z-z—Bang! Was the way one Andy Aiton described the first appearance of this little auklet. It was about 8 o'clock in the evening of February 7, 1909, near the corner of First and E Streets, Eureka, California. Mr. Aiton was standing on the street in front of his barber-shop, when a whirl of wings and a sharp crack, was followed by the dropping of a Paroquet Auklet (*Cyclorhynchus psittaculus*) to the street from above.

It was a dark stormy night; the drizzling rain growing into a dense fog, with a strong wind blowing, turned the night into a dreary haze. The auklet was evidently lost, and, probably attracted by the street lights, flew blindly against an overhead telephone wire, thereby stunning itself and causing it to fall to the street below. On picking it up, Mr. Aiton found the bird alive.

He gave the bird to a local taxidermist, who after skinning it, failed to ascertain the sex. I secured the skin in its fresh state and afterwards turned it over to Mr. F. J. Smith, in whose mounted collection it was placed.

This is probably the second record and the sixth specimen, of the rare little Paroquet Auklet for the state of California.—C. I. CLAY.

**An Elevated Camp.**—Last spring I wanted to lead the simple life close to nature by camping out, and built the usual camp on the ground, but hogs and cattle, besides skunks and rattlesnakes, run free about here. The accompanying photo shows the alternative chosen in preference to building a fence around the tent; and such a camp has several advantages over the ground camp. The platform, if anything, is easier built than a "hog-tight" fence, as is usually done here; I never heard of a "skunk-tight" fence being attempted. Possibly the yarns about skunks are stretched, as they never bothered me. If food is not dropped on the ground, rats and mice are much less troublesome, as they apparently do not climb oak trees in search of food; and ants are entirely eliminated by painting a ring of kerosene, or smearing pitch around the main poles between tent and points of support. The platform is about eight by sixteen feet.

The available dry space is more than doubled, and I have shelves and a punching bag on the "first floor", and considerable chemical apparatus to occupy my time profitably dur-

ing stormy weather. A pyramid miners' tent covering a space of six and one half by seven feet was found to give plenty of room for all purposes. The floor is of boards and has a trap door, so that wet coat and hat may be removed below and left there, the tent being entered by a ladder. We had a snow storm just after putting this up, and it was very much less damp, and with better ventilation than any ground camp I have occupied, as the snow fell away, instead of piling up around the tent.

A brush fence is often built around tents here, but in hot weather this increases the heat, besides causing danger from fire. My camp was safe and very comfortable in the hottest weather, as the brush was cut and burned for fifty feet all around, making it practically fire-proof.

It has caused more or less local comment, one remark being that it must be tiresome to live in such a small space, which of course cannot cause anything but a smile from a field ornithologist. The weather here is mostly fine, if windy, so that I have "all out of doors" to live in. I simply sleep and occasionally work in the tent, the "kitchen" being at a little distance and roofed over with boards.

The wildest available locality was selected, my judgment of the place being confirmed by a pair of Pileated Woodpeckers raising their brood nearby. The nest was certainly not



Fig. 80. AERIAL CAMP IN THE WOODS OF SOUTHERN OREGON,  
AS CONTRIVED BY C. W. BOWLES

more than 200 yards away, yet I was never able to catch them going to it. They seemed to take special delight in parading their young in Indian file, on all the trees around my camp, as often on the trees supporting it as anywhere else. From May 15 to 20 seems to be about the best time for nearly fresh eggs in this latitude.

The camp was in a stretch of heavy oak, fir and pine timber one mile long and a half mile wide, on a level bench near a steep bank, about fifty feet high, at the foot of which are the Illinois River and a large swamp covered with pines, cottonwoods and brush. Monotony at night was dispelled by all kinds of noises, great horned, screech and pigmy owls being conspicuous, but there seemed to be only one pair each of the first and last named.

Late in the summer what were probably a pair of long-ears (had a glimpse of one in daylight) kept up their cries for hours at a time. It seemed like the harsh grinding of the brake on a heavy cart wheel going down hill, but was in single, monotonous notes, about every forty to sixty seconds, and sounded like "creak—creak—creak", ad lib., as the doctors say. The pigmys at first started calling pretty much anywhere in the neighborhood, but finally the sound started every evening from about the same place for one of each series of

notes. One, probably the male's, was a very high pitched staccato affair, and the other similar but much lower, softer and more liquid. The soft notes finally started in one place about 200 yards away, but for some reason this fact did not dawn on me until it was too late to see if a nest might be located by waiting every evening nearer and nearer to the apparent location. The other bird appeared to roost in one place most of the time, but not always, and much farther off. Both were in the heavy timber away from the open stretches.

High up on the Big Elder Trail, leading from Waldo, Oregon, to Althouse Creek, another owl was heard, apparently not a variation of the great horned owl's call, although it must have been a large owl. The notes were "Hoot—hoot—toot—hoo-oo-o-o-o". The long dashes represent pauses of fully two seconds each, the first three notes being very short and sharp, while the last was prolonged for about a second, making each song (?) last about five seconds. This was the regular call and never varied on the two or three occasions that I passed there at night.

In the dark I traveled by feeling the trail with my feet in the inky darkness of the big fir timber; it is curious that it is possible to walk quite fast that way, the ground on each side of the trail being so much softer in the woods and rougher in rocky places, that the difference is instantly noticeable to the feet if the trail is left.

Several pairs of Hermit Thrushes kept the "desolate woods" anything but desolate around my camp during the day, but I have never yet heard a Willow Thrush—that is if the note is anything like the Wilson Thrush. Capen describes this as being like the sound made when a marble is rolled around in a big iron kettle, which seems to me not a bad description, as, although the sound varies, it lacks the sharp change of other thrush notes that I have heard. Hermit and Black-throated Gray warblers were also conspicuous neighbors around my camp, but most of the birds of this section prefer more open country.

Hummingbirds also nest in the big timber, probably more often than anywhere else, judging from the number of males, although I have found only three nests. One was about one hundred feet from my tent, forty feet from the ground in one of the largest firs; it was about twenty feet out on a small twig and beneath a large branch. Males killed by a cat in Kerby were Rufous, making it probable that the nest near camp belonged to that species although the male was not seen during the whole season. The special attraction of the neighborhood to the female was the large pile of ashes left from the brush I had burned. Apparently she came at least five times every day throughout the nesting season, as I was seldom at camp without at least one visit. On each occasion she would dip down into the ashes five or six times and pick up a mouthful, once about six feet from me. Apparently it was ashes she wanted and not small specks of charcoal. I was sorely tempted to shoot her



Fig. 81. C. W. BOWLES' CAMP AT KERBY, OREGON, IN SUMMER, SHOWING DETAILED CONSTRUCTION

to settle this point. At each dive, the suggestion of a violent tornado in miniature, as shown by the dust of the ashes, was very striking.—CHARLES W. BOWLES.

**Egrets in California.**—As the total extinction of the Egret (*Herodias egretta*) and the Snowy Egret (*Egretta candidissima candidissima*) has been prophesied, the following records should be of interest. A trip into the marsh lands southeast of Los Banos, Merced County, California, on July 11, 1912, revealed the fact that these two birds still exist in small numbers in this state.

A flock of seventeen egrets was first noted. The birds were first seen quietly standing about in an open marshy field. On nearer approach they took flight and were seen to settle down in a field some distance away. Later, a lone Snowy Egret was seen wading about in water about a foot deep. Still later in the day, three Egrets and two Snowy Egrets were seen feeding together. The aigrettes, the valuable feathers which caused the near extinction of these birds, could be seen. In no case would the large egrets permit one to approach nearer than a quarter of a mile. The lone Snowy Egret was approached within a distance of a hundred and fifty yards.

The Fulvous Tree-duck (*Dendrocygna bicolor*) was the bird most abundant in the locality. Other water and shore birds noted were: Pied-billed Grebe (*Podilymbus podiceps*), Forster Tern (*Sterna forsteri*), Black Tern (*Hydrochelidon nigra surinamensis*), Ruddy Duck (*Erisimatura jamaicensis*), Bittern (*Botaurus lentiginosus*), Least Bittern (*Ixobrychus exilis*), Great Blue Heron (*Ardea herodias herodias*), Anthony Green Heron (*Butorides virescens anthonyi*), Florida Gallinule (*Gallinula galeata*), Coot (*Fulica americana*), Avocet (*Recurvirostra americana*), Black-necked Stilt (*Himantopus mexicanus*), and Killdeer (*Oryechus vociferus*).

A Great Blue Heron picked up beneath the wires of an electric power line, where it had evidently accidentally killed itself, furnished abundant evidence as to the economic value of this bird. The stomach of this particular individual contained two large gophers (*Thomomys angularis*), still undigested. Considering the time of digestion one would naturally infer from this, that these birds must need a minimum daily food supply of an equivalent of two gophers. A complete knowledge as to the average number of gophers taken by one of these birds in a day would furnish interesting evidence as to their money value to the rancher. The patience displayed by one of these birds as it watches a gopher hole in an alfalfa field, and the cleverness shown in catching the rodent when it puts in an appearance, have become topics of conversation by many observing ranchers of the state.—H. C. BRYANT.

**Blue Jay Imitating Song of Brown Thrasher.**—On July 4, a hot, sultry day, while seated near an open window, a Blue Jay (*Cyanocitta cristata*) was seen to alight on a bush within twenty feet, and was observed to sing softly a song distinctly resembling that of the Brown Thrasher. Dr. Craig Thoms and I both saw its throat moving as it sang and have not the slightest doubt as to the source of the notes. It was softer and lacked the "ring" but was almost as pretty a song as the Brown Thrasher's own.

Dr. Thoms relates that some ten years ago on a similar hot afternoon in Des Moines, Iowa, he saw and heard a Blue Jay sing just outside of an open window. That time, though, the song was brief and didn't distinctly suggest that of any other common species.—S. S. FISHER.

**The Northern Brown Towhee.**—In 1899, Richard C. McGregor (Bull. Cooper Orn. Club 1, page 11) gave the name *Pipilo fuscus carolae* to what he at the time regarded as a separable form of the brown towhee from northern California (type from Battle Creek, Shasta County); and the name was adopted by the A. O. U. Committee. Subsequently several writers, including McGregor himself, expressed doubt as to the reality of the assigned characters, and the name was dropped from the A. O. U. List.

Some material has lately come into the California Museum of Vertebrate Zoology, which seems to me to establish adequate grounds for reinstating *carolae* as a valid subspecies. The material representing *carolae* is as follows: Kerby, Josephine County, Oregon, two (nos. 17201, 17202); California: Helena, Trinity County, one (no. 17359); Tower House, Shasta County, two (nos. 17360-17361); Tehama, Tehama County, ten (nos. 22856, 22871-22879); Winslow, Glenn County, five (nos. 22880-22884); Chico, Butte County, two (nos. 22869, 22870); Oroville, Butte County, one (no. 22868); Marysville Buttes, Sutter County, two (nos. 22866, 22867); Carbondale, Amador County, five (nos. 22860-22864); Galt, Sacramento County, one (no. 22865).

Specimens from the latter two localities approach *Pipilo crissalis senicula*, and others, from the rim of the southern San Joaquin Valley, are best referred to that form, the known range of which is hereby extended accordingly. *Pipilo crissalis crissalis* is thus to be considered as restricted to the coast region of west-central California.

The characters separating *carolae* from *crissalis*, are slightly larger size, and paler, more slaty and less brownish, coloration. From *senicula*, *carolae* differs in decidedly larger size and deeper, slaty-brown, tones of coloration. The two skins of *carolae* from Kerby, Oregon, (presented to the Museum by Mr. Charles W. Bowles), show the extreme of large size.—J. GRINNELL.



# THE CONDOR

A Magazine of  
Western Ornithology

Published Bi-Monthly by the  
Cooper Ornithological Club

J. GRINNELL, Editor, Berkeley, California  
HARRY S. SWARTH, Associate Editor  
J. EUGENE LAW }  
W. LEE CHAMBERS } Business Managers

---

---

Hollywood, California: Published Sept. 28, 1912

---

---

## SUBSCRIPTION RATES

One Dollar and Fifty Cents per Year in the United States, Canada, Mexico and U.S. Colonies, payable in advance  
Thirty Cents the single copy.

One Dollar and Seventy-five Cents per Year in all other countries in the International Postal Union.

Claims for missing or imperfect numbers should be made within thirty days of date of issue.

Subscriptions and Exchanges should be sent to the Business Manager.

Manuscripts for publication, and Books and Papers for review, should be sent to the Editor.

Advertising Rates on application.

---

---

## EDITORIAL NOTES AND NEWS

This issue is concluded with the annual "Club Roster". It shows the membership of the Cooper Ornithological Club on September 1, 1912, to be 410 in the active class, and six in the honorary class. We would be glad of information as to any errors in spelling, or changes in address, so that the Secretary's list may be perfected accordingly.

By the election of Mr. Frank Stephens to Honorary membership in the Cooper Club, just distinction has been conferred upon a man who is closely identified with the development of the ornithology of the southwest. As set forth in the Club's minutes on a subsequent page, Mr. Stephens may be fairly credited with having obtained a large part of the first information in regard to many of the birds peculiar to Arizona and southern California. This field-work was carried on, too, at a time when conditions made it far more difficult than we now can realize.

Cooper Club members will have noted with approval the new seal appearing on the title pages of *Avifauna* numbers 7 and 8. This design was executed and presented to the Club by the one-time editor of *THE CONDOR*, Mr. Walter K. Fisher, who thus registers his continued loyalty to the Club's welfare.

Mr. L. E. Wyman, of Nampa, Idaho, spent the month of June in the high mountains of central and northeastern Idaho, collecting birds and mammals for the Biological Survey.

Albert H. Frost, for some years a Cooper Club member, and always an enthusiastic de-

votee of oology, died at his home in New York City, January 27, 1912. Mr. Frost visited California in 1898, and at that time became widely and favorably known to many of the bird students on this coast.

## SHALL CALIFORNIA HAVE A "NO-SALE OF AMERICAN DUCKS" LAW?

The report of an Ohio State Senate Committee for 1857, contains the following:

"The passenger pigeon needs no protection. Wonderfully prolific, having the vast forests of the North as its breeding grounds, traveling hundreds of miles in search of food, it is here today and elsewhere tomorrow, and no ordinary destruction can lessen them or be missed from the myriads that are yearly produced."

Note the following from the same report:

"The snipe needs no protection. It does not breed in Ohio, but merely tarries a while in its migration to the breeding grounds in the extreme North. The snipe, too, like the pigeon, will take care of itself, and its yearly numbers cannot be materially lessened by the gun."

After the few years which have elapsed since then, we are in a position to realize how short-sighted the American people have been in the matter of adequate and timely protection of wild life. It is furthermore clearly apparent that the reason for this lack of foresight has been the easy but erroneous belief in the inexhaustibility of our wild game. But why discuss a matter so clear to every one?

In the official "Hearings" (1912) before the United States Senate Committee on Forest Reservations and Game, to which the McLean bill providing for Federal protection of migratory birds was referred, our own Senator Perkins (California) said: "On the Pacific Coast they say game birds are *increasing*." Suggestions heard from other quarters indicate the prevailing dense ignorance concerning this important matter. Competent testimony from many points in the state has it that every game bird, with the exception of quail in certain localities, is rapidly *decreasing* in numbers.

The ducks are going down with such speed that two species, the Red-head and Wood Duck, are now facing extinction. All this while the Army of Destruction is increasing; means of rapid transit from city to hunting grounds are being perfected; shot guns are becoming continually more highly efficient killing machines; and the waste land suitable to wild life is becoming more and more restricted.

New York and Massachusetts now prohibit absolutely the sale of American-killed wild game of any kind. Shall we in California put through a law of this kind, or shall we be listed with those other states and countries in the "It might have been" column?

Every Cooper Club member should realize that the cause is one which issues a pointed challenge to every nature-lover. What can



the individual do? Become a center of information as to the present condition of our remnant of wild life, and an enthusiastic booster for more and better laws and the rigorous enforcement of those now existent.

"The wild life of today is not wholly ours, to dispose of as we please. It has been given to us *in trust*. We must account for it to those who come after us and audit our records."—W. P. TAYLOR.

#### MINUTES OF COOPER CLUB MEETINGS

##### SOUTHERN DIVISION

MAY.—The May meeting of the Cooper Ornithological Club was called to order in the committee room of the Museum of History, Science and Art, with Mr. Willett in the chair and the following members present: Howell, Lamb, Willett, Antonin Jay, Alphonse Jay, Zahn, Davis, Daggett, Rich, and Miller. The following ladies were visitors: Miss Mary H. Hainline, Denver, Colorado; Mrs. A. W. Beven, Chicago, Ill., and Miss F. M. Shields, Chicago, Ill.

The chairman appointed Mr. Miller as secretary pro tem. The minutes of the April meeting were read and approved. On motion by Mr. Lamb, the secretary was instructed to cast the unanimous ballot of the club electing to membership the following applicants, as proposed at the April meeting:—Kate W. McGraw, C. W. Chamberlain, Asa W. Chandler, L. K. Tevis, and Geo. Wood. The name of Mrs. Frances M. Harmon was proposed for membership in the club, the application to lie on the table till the next regular meeting of the club. The resignation of Dr. Garrett Newkirk of Pasadena was read and upon motion by Mr. Daggett was accepted. Announcement of the death of Mr. A. B. Frost was read and was referred to the secretary for publication in *THE CONDOR*.

Letters from Mr. W. P. Taylor of the northern division of the Club regarding protection of wild life of the state were read, and freely and favorably discussed by the club. On motion by Mr. Daggett, seconded by Mr. Lamb, the secretary of the committee on the preservation of wild life was authorized to write letters to various members of the committee in Congress having to do with federal legislation on the protection of game.

The meeting adjourned to spend a very pleasant hour under the direction of Mr. Daggett inspecting the beautiful building of the museum and the very creditable work accomplished in the short time that its energetic director has been at work. Unqualified commendation was expressed by all.—LOYE MILLER, *Secretary pro tem*.

JUNE.—The meeting of the Southern Division of the Cooper Ornithological Club was held on June 27, 1912, in the committee room of the Museum of History, Science and Art, with vice-president Leland in the chair, and the following members present: Mrs. Harmon, and Messrs. Chambers, Daggett, Fisher,

Granville, Howard, Howell, Lamb, Law, Lelande, Miller, Rich, Smith, Snyder, Willett, and Zahn.

The minutes of the Southern Division for May were read and approved. Upon motion by Mr. Willett, seconded by Mr. Rich and duly carried, the Secretary was instructed to cast the unanimous ballot of those present electing to active membership Mrs. Frances Harmon, proposed at the last meeting.

Applications for membership were proposed as follows: Don C. Phillips, Bakersfield, California, proposed by H. C. Bryant; R. D. Jewett, Los Angeles, proposed by G. Willett; Chas. Jeffreys, Tetbury, England, proposed by A. B. Howell; John Dryden Kuser, Bernardsville, N. J., proposed by W. Lee Chambers.

Upon motion of Mr. Willett, seconded by Mr. Chambers and duly carried, the secretary was instructed to notify the Audubon Society that the Southern Division of the Cooper Club would gladly co-operate with it in endeavoring to procure satisfactory bird legislation. After an extended discussion of bird legislation and a pleasant bird chat, the meeting adjourned and inspected the progress made in placing specimens in the new museum. The displays are beginning to show up and some of the new ideas, which Mr. Daggett as Director has introduced, will result in a very attractive exhibit. Adjourned.—J. E. LAW, *Secretary*.

JULY.—The July meeting of the Southern Division of the Cooper Ornithological Club was held on Thursday evening, July 25, 1912, in the Directors' room at the Los Angeles County Museum of History, Science and Art, with the following members present: Chambers, Daggett, Howell, Lamb, Law, Miller, and Rich, and A. W. Brauer as visitor.

Mr. Daggett was elected Chairman. The minutes of the Southern Division for June were read and approved. Messrs. Don C. Phillips, R. D. Jewett, Chas. Jeffreys and John Dryden Kuser, nominated at a previous meeting, were elected to active membership. The resignation of M. C. Blake was accepted. Applications for membership were proposed as follows: Samuel Hubbard, Jr., Oakland, Cal., proposed by A. B. Howell; Jesse J. Wood, Santa Barbara, Cal., proposed by W. Lee Chambers; Mrs. J. W. Wheeler, Seattle, Wash., proposed by J. L. Sloanaker; William A. Magee, Jr., Oakland, Cal., proposed by W. Lee Chambers.

On motion by Mr. Miller and seconded by Dr. Rich, the by-law relating to the distribution of Avifaunas was altered to read:

"The sale and distribution of Avifaunas to be left in the hands of the Business Managers, who shall establish prices for the sale of such publications. Members shall receive copies of such publications at half regular prices thus established."

A telegram to Mr. Law from the State Fish and Game Commission was read, stat-

ing that the Hearst papers were conducting a campaign against the proposed legislation for better and further game protection. Various paper clippings on the same subject were read. Mr. Law has written the State Fish and Game Commission and others, assuring them of his hearty support and co-operation in any laws that will benefit and preserve the wild life in California. On motion by Mr. Miller and seconded by Mr. Chambers, the Southern Division adopted a resolution upholding and supporting the sentiments expressed by Mr. Law. Adjourned.—CHESTER LAMB, *Secretary pro tem.*

## NORTHERN DIVISION

AUGUST—The regular monthly meeting of the Northern Division was held at the Museum of Vertebrate Zoology, Berkeley, Saturday evening, August 17, with vice-president Carriger in the chair, and the following members present: Messrs. Bryant, Grinnell, Heinemann, Ray, Shelton, Stone, Swarth and Taylor. Mr. Dutke was present as a visitor. The minutes of the last (March) Northern Division meeting were read and approved, followed by the reading of the minutes of the last three Southern Division meetings. The long list of proposals for membership acted upon by the Southern Division during the past four months were read, but inasmuch as these had all been accepted by that division, it was not considered necessary to lay them over for another month for election in the Northern Division, and their acceptance was accordingly ratified at once.

The following proposal was read:

We, the undersigned, active members of the Cooper Ornithological Club, hereby propose for honorary membership in the Club, Mr. Frank Stephens of San Diego.

Our reasons for proposing this recognition of Mr. Stephens' connection with western ornithology are as follows: The candidate may be justly credited with a very large proportion of the first published information in regard to the birds of Arizona and southern California. This information was nearly all of it issued under the authorship of Brewster, Bendire, Fisher and Morcom. It was one result of untiring field work at a time when conditions made it far more difficult than we now can realize.

Furthermore, Mr. Stephens collected a large proportion of the specimens which became the basis of the first intensive systematic work on the birds of the regions named. Both specimens and facts gathered point towards a superior ability as a field naturalist.

We believe that the election of Mr. Stephens to honorary membership in the Club is only justice as an expression of appreciation of his services to western ornithology.

(Signed) JOSEPH MAILLIARD,  
H. W. CARRIGER,  
H. S. SWARTH,  
J. GRINNELL.

The motion was enthusiastically endorsed in brief speeches by several of the members present, and was passed without a dissenting vote, subject to the approval of the Southern Division.

The Southern Division minutes contained a motion relative to the distribution of the Club's publications, but inasmuch as this departure from former methods had not been made in the manner provided by the Constitution, the Northern Division decided that it was powerless to act in the matter. The secretary was instructed to communicate with the secretary of the Southern Division, calling his attention to the irregularity of the action, and urging the impossibility of its sanction by this Division.

After the disposal of the above business, the paper of the evening was read: A Description of the Nesting of the California Pine Grosbeak, by Milton S. Ray. Specimens of the birds and eggs were on exhibition, together with numerous photographs.

Mr. Grinnell then gave a brief talk on the prospects of the Band-tailed Pigeon as a game bird. This was a summary of data gathered for the Fish and Game Commission, to aid in the drafting of suitable protective laws, and described the several peculiar phenomena in the life history of the species, which render the birds so difficult to protect. Adjourned.—H. S. SWARTH, *Secretary.*

# DIRECTORY OF MEMBERS OF THE COOPER ORNITHOLOGICAL CLUB

Revised to September 1, 1912

(Residence in California unless otherwise stated. Year following address indicates date of election).

## HONORARY MEMBERS

Allen, Dr. J. A., American Museum of Natural History, New York, N. Y. 1910.  
Beal, Prof. F. E. L., Dept. of Agriculture, Washington, D. C. 1910.  
Belding, Lyman, Stockton. 1896.  
Merriam, Dr. C. Hart, 1919 16th St., Washington, D. C. 1909.  
Ridgway, Robert, 3353 18th St., N. W., Washington, D. C. 1905.  
Stephens, Frank, Box 13, R. F. D. 2, San Diego. 1912.

## ACTIVE MEMBERS

Adams, Ernest, Box 21, Clipper Gap, Placer Co. 1896.  
Alexander, Miss Annie M., Seaview and Union Aves., Piedmont. 1908.  
Allen, Arthur A., 115 Stewart Ave., Ithaca, N. Y. 1911.  
Anderson, Malcolm P., Menlo Park. 1901.  
Appleton, J. S., Simi, Ventura Co. 1901.  
Arnold, B. W., 465 State St., Albany, N. Y. 1910.

- Arnold, E., Frt. Claim Agt., Grand Trunk Ry., Montreal, Quebec. 1910.
- Arnold, Dr. Ralph, 917 Union Oil Bldg., Los Angeles. 1893.
- Arnold, Dr. W. W., 504 N. Nevada Ave., Colorado Springs, Colo. 1911.
- Atkinson, W. L., 28 E. Santa Clara St., San Jose. 1901.
- Atsatt, Miss Sara R., 1207 West 5th St., Los Angeles. 1911.
- Bailey, Bernard, Corvallis, Montana. 1911.
- Bade, Wm. Frederic, 2616 College Ave., Berkeley. 1903.
- Bailey, Florence Merriam, 1834 Kalorama Rd., Washington, D. C. 1910.
- Bailey, H. H., Box 154, Newport News, Va. 1903.
- Bailey, Vernon, 1834 Kalorama Rd., Washington, D. C. 1904.
- Bales, Dr. B. R., 151 West Main St., Circleville, Ohio. 1906.
- Bangs, Outram, Museum Comparative Zoology, Cambridge, Mass. 1910.
- Barbour, Rev. Robt., Y. M. C. A., Montclair, N. J. 1911.
- Barker, Reginald C., Blackwater, Pinal Co., Ariz. 1911.
- Barnes, R. Magoon, Lacon, Ill. 1908.
- Barrows, Prof. Walter B., Box 183, East Lansing, Mich. 1909.
- Batchelder, Chas. F., 7 Kirtland St., Cambridge, Mass. 1910.
- Baynard, Oscar E., Fort Myers, Fla. 1911.
- Beck, Rollo H., Berryessa. 1894.
- Beckman, Orland, Sespe. 1911.
- Beers, Henry W., 91 Denver Ave., Bridgeport, Conn. 1910.
- Bennett, R. H., Room 409, 444 Market St., San Francisco. 1909.
- Bent, A. C., Taunton, Mass. 1909.
- Bigelow, Homer L., Old Orchard Road, Chestnut Hill, Mass. 1910.
- Birdseye, Clarence, Biological Survey, Washington, D. C. 1909.
- Bishop, Dr. Louis B., 356 Orange St., New Haven, Conn. 1904.
- Blain, Merrill W., 1026 N. Coronado St., Los Angeles. 1909.
- Blayney, Nita A., 920 O St., Fresno. 1911.
- Bliss, J. G., 3281 Briggs Ave., Alameda. 1908.
- Bohlman, Herman T., 202 Occident St., Portland, Oregon. 1903.
- Bolander, L. P., Jr., 545 N. Sutter St., Stockton. 1907.
- Bowdish, B. S., Demarest, N. J. 1910.
- Bowles, Chas. W., 1325 Lincoln Way, San Francisco. 1903.
- Bowles, J. H., "The Woodstock", Tacoma, Wash. 1903.
- Boyce, John J., Box 142, Berkeley. 1910.
- Boyer, Edgar, Marshfield, Oregon. 1911.
- Braislin, Wm. C., M. D., 556 Washington Ave., Brooklyn, N. Y. 1910.
- Brandreth, Courtney, Ossining, N. Y. 1911.
- Brauer, W. G., Silver Lake. 1911.
- Brewster, William, 145 Brattle St., Cambridge, Mass. 1904.
- Brooks, Allan, Okanogan Landing, B. C., Canada. 1906.
- Brown, C. Emerson, Boston Society Natural History, Boston, Mass. 1911.
- Brown, D. E., Room 11, Federal Bldg., Tacoma, Wash. 1909.
- Brown, Dudley H., 166 Parnassus Ave., San Francisco. 1911.
- Brown, Wm. J., 250 Oliver St., Westmont, Quebec, Canada. 1911.
- Brown, W. W., Jr., 1033 Key West St., Los Angeles. 1909.
- Bryant, Harold C., 2508 Haste St., Berkeley. 1910.
- Buckland, Hon. James, Royal Colonial Institute, Northumberland Ave., London, England. 1912.
- Burnett, W. L., Box 691, Ft. Collins, Colorado. 1910.
- Burnham, Dr. Clark, Bushnell Place, Berkeley. 1907.
- Burnham, Mrs. Clark, Bushnell Place, Berkeley. 1907.
- Burns, Frank L., Berwyn, Pa. 1909.
- Burt, H. C., Monolith, Kern Co. 1910.
- Burtch, Verdi, Branchport, N. Y. 1910.
- Buturlin, Sergius A., Wessenberg, Esthonia, Russia. 1909.
- Caduc, Eugene E., 563 Massachusetts Ave., Boston, Mass. 1911.
- Camp, Chas., Sierra Madre. 1909.
- Carpenter, Nelson K., Box 127, Escondido. 1901.
- Carriger, Henry W., 5185 Trask Ave., Oakland. 1895.
- Carriker, M. A., Jr., Cincinnati Coffee Co., Santa Marta, Colombia, South America. 1911.
- Case, C. M., 7 Holcom St., Hartford, Conn. 1911.
- Chamberlain, C. W., 36 Lincoln St., Boston, Mass. 1912.
- Chamberlin, Willard, Box 45, University of New Mexico, Albuquerque, N. M. 1906.
- Chamberlin, W. J., 1131 Maple Ave., Los Angeles. 1912.
- Chambers, W. Lee, Eagle Rock, Los Angeles Co. 1897.
- Chandler, Asa C., 2123 Bancroft Way, Berkeley. 1912.
- Chapman, Frank M., Amer. Mus. Nat. Hist., Central Park, New York City, N. Y. 1903.

- Childs, John Lewis, Floral Park, N. Y. 1904.
- Clark, Josiah H., 238 Broadway, Paterson, N. J. 1910.
- Clarke, Rowena A., Kirkwood Branch, "Seven Gables", St. Louis, Mo. 1911.
- Clay, C. Irvin, Box 353, Eureka. 1910.
- Clifton, H. T., 509 E. Walnut St., Pasadena. 1904.
- Coale, Henry K., Highland Park, Ill. 1907.
- Coffin, Sherwood, 35 2nd St., San Francisco. 1911.
- Coggins, Herbert L., 776 Mission St., San Francisco. 1910.
- Cohen, Donald A., Alameda. 1894.
- Colburn, A. E., 744 So. Broadway, Los Angeles. 1905.
- Cooke, Wells W., Biological Survey, Washington, D. C. 1911.
- Cooper, James S., 830 53rd St., Oakland. 1903.
- Court, E. J., 1723 Newton St., Mt. Pleasant, Washington, D. C. 1911.
- Craven, Jesse T., 811 Roosevelt Ave., Detroit, Mich. 1909.
- Crosby, Maunsell S., Grasmere Farms, Rhinebeck, N. Y. 1911.
- Currier, Ed. S., P. O. Drawer 21, St. Johns, Multnomah Co., Oregon. 1904.
- Daggett, Frank S., 2833 Menlo Ave., Los Angeles. 1895.
- Dalgleish, John J., Brankston Grange, Alloa, Scotland. 1910.
- Darlington, E. J., 1111 West St., Wilmington, Delaware. 1911.
- Davenport, Mrs. Elizabeth B., Lindenhurst, Brattleboro, Vt. 1911.
- Davis, Evan, Orange. 1894.
- Davis, J. M., 811 O St., Eureka. 1908.
- Dawson, W. Leon, R. D. 3, Box 83, Santa Barbara. 1906.
- Day, Chester S., 15 Chilton Road, West Roxbury, Mass. 1910.
- Dean, W. F., Three Rivers. 1901.
- Deane, Ruthven, 135 Adams St., Chicago, Ill. 1904.
- Deane, Walter, 29 Brewster St., Cambridge, Mass. 1907.
- Dearborn, Ned, Linden, Md. 1909.
- Dewey, C. L., 6649 Woodlawn Ave., Chicago, Ill. 1910.
- Dickey, Donald R., Box 701, Pasadena. 1910.
- Dickey, Samuel S., 31 S. West St., Waynesburg, Pa. 1911.
- Dille, F. M., 325 16th St., Denver, Colo. 1903.
- Dixon, Joseph, Escondido. 1904.
- Douglas, J. S., Bin 7, Bakersfield. 1911.
- Du Bois, Alexander Dawes, 320 W. Waldron St., La Fayette, Ind. 1911.
- Dunbar, W. Linfred, care of Remington Arms Co., Bridgeport, Conn. 1911.
- Duprey, H. F., Dixon. 1907.
- Durfee, Owen, Box 125, Fall River, Mass. 1911.
- Dutcher, Wm., 990 Central Ave., Plainfield, N. J. 1905.
- Dwight, Jonathan, Jr., M. D., 134 W. 71st St., New York, N. Y. 1904.
- Earle, Miss Eleanor P., Palma Sola, Manatee Co., Florida. 1911.
- Eastman, Lt. F. B., 10th Infantry, Newark, Delaware. 1904.
- Edson, J. M., Marietta Road, Bellingham, Wash. 1911.
- Esterly, C. O., Occidental College, Los Angeles. 1908.
- Evermann, Barton W., Bureau of Fisheries, Washington, D. C. 1911.
- Fawcett, F. H., Narrows, Harney Co., Oregon. 1912.
- Ferris, H. H., care Y. M. C. A., Lake Geneva, Wisconsin. 1910.
- Finley, Wm. L., 651 East Madison St., Portland, Oregon. 1900.
- Fischer, E. J., 525 West 57th St., Los Angeles. 1910.
- Fisher, Dr. A. K., Biological Survey, Washington, D. C. 1904.
- Fisher, Miss Elizabeth, 2222 Spruce St., Philadelphia, Pa. 1910.
- Fisher, Prof. Walter K., Box 373, Palo Alto. 1900.
- Flanagan, John H., 392 Benefit St., Providence, R. I. 1904.
- Fleming, J. H., 267 Rusholme Road, Toronto, Ontario, Canada. 1910.
- Flint, Wm. R., 129 N. Hill Ave., Pasadena. 1912.
- Follett, Richard E., 84 State St., Boston, Mass. 1909.
- Forrest, E. R., 261 Locust Ave., Washington, Pa. 1910.
- Fortiner, J. C., Jr., Brawley. 1910.
- Fowler, Frederick H., Palo Alto. 1901.
- Fox, Mrs. L. L., Los Olivos, Santa Barbara Co. 1911.
- Frazier, J. F., Audubon, Iowa. 1911.
- Fuertes, Louis A., Cornell Heights, Ithaca, N. Y. 1904.
- Gane, Henry Stewart, Santa Barbara. 1903.
- Gardner, Leon L., Claremont. 1911.
- Gault, Benj. T., Glen Ellyn, Ill. 1905.
- Gay, Harold S., Box 7, Coronado. 1901.
- Gifford, E. W., California Academy of Sciences, San Francisco. 1904.
- Gilman, M. French, Sacaton, Arizona. 1901.
- Goldman, E. A., Biological Survey, Washington, D. C. 1901.
- Goldman, Luther J., Orosi. 1908.
- Goodwin, Rev. S. H., Box 284, Provo, Utah. 1910.

- Gould, Jos. E., 5 Clifton St., Norfolk, Va. 1909.
- Grant, Chapman, N. Y. Aquarium, Battery Park, New York. 1906.
- Grant, U. S., 4th, Manter Hall, Cambridge, Mass. 1909.
- Granville, Fred, 3414 Pasadena Ave., Los Angeles. 1911.
- Grey, Henry, R. F. D. 2, Box 154A, San Diego. 1901.
- Grinnell, Joseph, Museum Vert. Zoology, University of California, Berkeley. 1894.
- Groesbeck, Charles E., Venice. 1897.
- Guion, Geo. S., Napoleonville, La. 1911.
- Halladay, Daniel S., 729 Central Bldg., Los Angeles. 1910.
- Hamilton, Dr. B. A., Highland Park, Ill. 1911.
- Hann, H. H., Parkdale, Oregon. 1909.
- Hanna, Wilson C., Box 146, Colton. 1902.
- Harris, R. Park, care of Wm. Wood, Renton, Wash. 1909.
- Hathaway, Harry S., Box 1466, Providence, R. I. 1912.
- Hawver, Dr. J. C., Box 214, Auburn. 1909.
- Hazard, R. G., Peace Dale, R. I. 1909.
- Head, Miss Anna, 2730 Belrose Ave., Berkeley. 1912.
- Heald, Miss Elizabeth, 2223 Chapel St., Berkeley. 1911.
- Heinemann, Oluf J., 1662 Grove St., San Francisco. 1908.
- Heller, Edmund, U. S. National Museum, Washington, D. C. 1894.
- Helme, Arthur H., Miller Place, Suffolk Co., N. Y. 1911.
- Henderson, Hon. Junius, Box 398, Boulder, Colorado. 1909.
- Henshaw, H. W., Biological Survey, Washington, D. C. 1909.
- Hersey, L. J., 2121 West 34th Ave., Denver, Colorado. 1909.
- Holland, Harold M., Box 515, Galesburg, Ill. 1901.
- Holt, Wm. L., Nageleseestr. 33, Frieburg im Breisgan, Germany. 1909.
- Hoover, Theodore J., 1 London Wall, London, E. C., England. 1898.
- Howard, O. W., Box 484, Los Angeles. 1895.
- Howell, Alfred Brazier, Covina. 1908.
- Howell, B. F., Jr., 6 North West College, Princeton, N. J. 1909.
- Hoves, Paul G., Stamford, Conn. 1910.
- Howsley, L. B., Nyssa, Oregon. 1909.
- Hoxie, W. J., 1522 Bull St., Savannah, Ga. 1911.
- Hubbard, Samuel, Jr., 98 Montecito Ave., Oakland. 1912.
- Hubbs, Carl L., 610 N. Figueroa St., Los Angeles. 1910.
- Huey, Lawrence, 32nd St. & Clay Ave., San Diego. 1909.
- Hunter, J. S., Union Hotel, San Mateo. 1903.
- Illingworth, J. F., Agricultural College, Ithaca, N. Y. 1896.
- Ingersoll, A. M., 832 5th St., San Diego. 1895.
- Irving, F. N., 306 W. 36th St., Savannah, Ga. 1910.
- Isham, C. Bradley, 30 E. 63rd St., New York, N. Y. 1909.
- Jackson, Thos. H., 304 N. Franklin St., West Chester, Pa. 1911.
- Jacobs, J. Warren, 404 S. Washington St., Waynesburg, Pa. 1909.
- Jay, Alphonse, 1622 Pennsylvania Ave., Los Angeles. 1901.
- Jay, Antonin, 1622 Pennsylvania Ave., Los Angeles. 1901.
- Jeffreys, Charles, Tetbury, England. 1912.
- Jessee, Dr. R. L., Philo, Ill. 1909.
- Jewett, R. D., 1238 Cahuenga St., Los Angeles. -1912.
- Jewett, Stanley G., 582 Bidwell Ave., Portland, Oregon. 1909.
- Johnson, Frank Edgar, 16 Amackassin Terrace, Yonkers, N. Y. 1911.
- Johnson, Miss Myrtle E., National City, 1908.
- Jonas, Coleman, 1023 Broadway, Denver, Colorado. 1910.
- Jones, Prof. Lynds, Museum Oberlin College, Oberlin, Ohio. 1911.
- Jordan, A. H. B., Everett, Wash. 1911.
- Jordan, Dr. David Starr, Stanford University. 1902.
- Judson, W. B., 409 Mason Opera House, 127 S. Broadway, Los Angeles. 1894.
- Julien, Miss Lillian M., Yreka, Siskiyou Co. 1901.
- Kaeding, Geo. L., Battle Mountain, Nevada. 1903.
- Kaeding, Henry B., Candor, N. C. 1895.
- Kellogg, Miss Louise, 1253 Grove St., Oakland. 1911.
- Kellogg, Prof. Vernon L., Stanford University. 1901.
- Kennard, Frederic Hedge, Dudley Road, Newton Centre, Mass. 1911.
- Kennedy, C. H., Vinecrest Ranch, Sunnyside, Wash. 1912.
- Kermode, F., Provincial Museum, Victoria, B. C. 1911.
- Kessing, Lawrence R., 1430 Santa Clara Ave., Alameda. 1899.
- Keyes, Prof. Chas. R., Mt. Vernon, Iowa. 1900.
- Kimball, H. H., 1527 M St., Fresno. 1909.
- Knickerbocker, Chas. K., 445 N. Sacramento Ave., Carpenter Sta., Chicago, Ill. 1905.



- Knowlton, Dr. F. H., U. S. Nat. Museum, Washington, D. C. 1910.
- Kofoed, Prof. C. A., University of California, Berkeley. 1909.
- Kohler, Louis S., 98 Watsessing Ave., Bloomfield, N. J. 1909.
- Kuser, John D., Bernardsville, New Jersey. 1912.
- Lamb, Chester C., 549 W. 43rd Place, Los Angeles. 1899.
- Lancashire, Mrs. J. H., Alma, Michigan. 1911.
- Lane, F. M., 346 Blackstone Ave., Fresno. 1911.
- Law, J. Eugene, Hollywood. 1900.
- Leland, H. J., 246 Wilcox Building, Los Angeles. 1897.
- Lewis, L. Alva, 809 Yeon Bldg., Portland, Oregon. 1912.
- Libby, Miss Gretchen L., care of Fish and Game Commission, Mills Bldg., San Francisco. 1911.
- Linton, C. B., 125 W. Ocean Ave., Long Beach. 1906.
- Litsey, John B., Jr., 1722 Alston Ave., Fort Worth, Texas. 1911.
- Littlejohn, Chase, Redwood City. 1909.
- Loomis, Leverett M., California Academy Sciences, San Francisco. 1902.
- Love, Chas. A., 3353 22nd St., San Francisco. 1901.
- Luce, George W., Haywards. 1904.
- Luther, Clarence H., 8 McIlroy Bldg., Fayetteville, Ark. 1909.
- Magee, Wm. A., Jr., R. F. D. Box 433, Fruitvale, Oakland. 1912.
- Mailliard, Ernest C., Bank of California, San Francisco. 1909.
- Mailliard, John W., 300 Front St., San Francisco. 1894.
- Mailliard, Joseph, 1815 Vallejo St., San Francisco. 1895.
- Marsden, H. W., Witch Creek. 1905.
- Massey, Herbert, Ivy Lea, Burnage, Didsbury, Manchester, England. 1909.
- Matthews, Dr. Ellen, 142 Kenwood Ave., Glendale. 1901.
- McAtee, W. L., Biological Survey, Dept. of Agriculture, Washington, D. C. 1907.
- McGraw, Kate W., 2301 Hearst Ave., Berkeley. 1912.
- McGregor, R. C., Bureau of Science, Manila, P. I. 1893.
- McLain, R. B., Market and 12th St., Wheeling, W. Va. 1897.
- McQuilling, W. S., 125 N. Fair Oaks Ave., Pasadena. 1909.
- Mearns, Maj. Edgar A., U. S. Nat. Mus., Washington, D. C. 1905.
- Meeker, Jesse C. A., 51 Washington Ave., Danbury, Conn. 1907.
- Meister, H. D., Wauseon, Ohio. 1909.
- Merrill, F. S., Box 855, Spokane, Wash. 1912.
- Mershon, W. B., Saginaw, Mich. 1911.
- Messenger, G. H., Linden, Iowa. 1910.
- Miller, Prof. Loye Holmes, State Normal School, Los Angeles. 1905.
- Miller, Mrs. Olive Thorne, 5928 Hayes Ave., Los Angeles. 1911.
- Miller, W. DeWitt, American Museum Natural History, New York, N. Y. 1909.
- Miner, Dr. H. N., 1426 Henry St., Berkeley. 1903.
- Mitchell, Dr. Walton I., 603 Beacon Bldg., Wichita, Kansas. 1909.
- Moore, Robert T., 46 Mansion Ave., Hadonfield, New Jersey. 1911.
- More, R. L., Vernon, Texas. 1911.
- Moran, R. B., 661 Waverly St., Palo Alto. 1897.
- Morcom, G. Frean, 1815 N. Raymond Ave., Pasadena. 1904.
- Mueller, Carl, Marysville. 1911.
- Munk, Dr. J. A., 337½ So. Hill St., Los Angeles. 1909.
- Myers, Mrs. H. W., 306 Ave. 66, Los Angeles. 1912.
- Nehrling, H., Gotha, Orange Co., Florida. 1911.
- Nelson, E. W., Biol. Survey, U. S. Dept. Agriculture, Washington, D. C. 1904.
- Newbury, F. E., 921 Shreve Bldg., San Francisco. 1904.
- Nichols, J. T., Columbus Ave. and W. 77th St., New York, N. Y. 1909.
- Nicholson, Donald J., Orlando, Florida. 1911.
- Noack, H. R., 309 Perry St., Oakland. 1901.
- Norris, Joseph Parker, Jr., 2122 Pine St., Philadelphia, Pa. 1911.
- Norris, Roy, 725 N. 10th St., Richmond, Indiana. 1911.
- Oberholser, Harry C., 1444 Fairmont St., N. W., Washington, D. C. 1904.
- Ohlendorf, W. C., M. D., New No. 1922 Blue Island Ave., Chicago, Ill. 1910.
- Osgood, Wilfred H., Field Museum Natural History, Chicago, Ill. 1893.
- Ottmer, Dr. F. H., Eureka. 1911.
- Owen, Miss Juliette A., 306 N. 9th St., St. Joseph, Mo. 1911.
- Owen, Virgil W., U. S. Dist. Court, Federal Bldg., Los Angeles. 1896.
- Palmer, Miss Elizabeth Day, 1741 Harvard Blvd., Los Angeles. 1909.
- Palmer, Dr. T. S., 1939 Biltmore St., N. W., Washington, D. C. 1903.
- Parker, Herbert, South Lancaster, Mass. 1911.
- Paul, Lucius H., 59 W. Miller St., Newark, N. Y. 1911.



- Peabody, Rev. P. B., Blue Rapids, Kansas. 1904.
- Pearson, T. Gilbert, 2257 Loving Place, New York, N. Y. 1910.
- Peck, Morton E., R. D. 4, Box 13, Salem, Oregon. 1909.
- Pemberton, J. R., 18th and Corbett Road, Simons-Fout Brick Co., San Francisco. 1900.
- Pennock, Chas. J., Kennett Square, Chester Co., Penn. 1909.
- Perez, Richard M., 1222 Alvarado St., Los Angeles. 1909.
- Peyton, Lawrence, Sespe. 1909.
- Phelps, Frank N., 212 4th St., Elyria, Ohio. 1912.
- Philipp, Philipp B., 220 Broadway, New York, N. Y. 1911.
- Phillips, Don C., 49 N. Main St., Napa. 1912.
- Phillips, John C., Knobfields, Wenham, Mass. 1911.
- Pierce, Wright M., Box 116, Claremont. 1902.
- Pilsbury, Frank O., 90 Main St., Walpole, Mass. 1911.
- Pleasants, Mrs. J. E., R. D. 3, Orange. 1900.
- Peterson, W. M., Manuelito, New Mexico. 1908.
- Pomeroy, H. K., Box 575, Kalamazoo, Mich. 1909.
- Price, A. E., Grant Park, Ill. 1905.
- Randolf, Miss Flora A., 2962 Derby St., Berkeley. 1907.
- Rathbun, S. F., 217 14th Ave. N., Seattle, Wash. 1904.
- Ray, Milton S., 220 Market St., San Francisco. 1899.
- Redington, A. P., Box 66, Santa Barbara. 1897.
- Reining, Chas., 1436 Clay St., Davenport, Iowa. 1906.
- Renick, Frank H., 1424 Belmont Ave., Seattle, Wash. 1912.
- Rich, Guy C., M. D., 1820 El Cerrito Place, Hollywood. 1911.
- Richards, E. B., 412 Kate Hayes St., Box 805, Grass Valley, Nevada Co. 1909.
- Richards, Dr. T. W., 1911 N St., N. W., Washington, D. C. 1908.
- Richardson, Chas. H., Jr., Stanford University. 1902.
- Richmond, Dr. Chas. W., U. S. Nat. Museum, Washington, D. C. 1904.
- Riley, J. H., U. S. Nat. Museum, Washington, D. C. 1909.
- Ritter, Prof. W. E., La Jolla. 1901.
- Roberts, Austin F., 981 Summit Ave., Pasadena. 1909.
- Roberts, Dr. T. S., 1603 4th Ave., Minneapolis, Minn. 1909.
- Robertson, Howard, 526 Merchants Trust Bldg., Los Angeles. 1896.
- Rockwell, Robt. B., 1240 Downing Ave., Denver, Colorado. 1908.
- Rossignol, Gilbert R., Jr., 2116 Bull St., Savannah, Ga. 1909.
- Rowley, J., 42 Plaza Drive, Berkeley. 1909.
- Rust, Henry J., Box 683, Coeur d'Alene, Idaho. 1911.
- Sage, John H., Portland, Conn. 1910.
- Sampson, Walter B., 419 Forum Bldg., Sacramento. 1894.
- Saunders, Aretas A., care of Forest Service, Choteau, Montana. 1909.
- Schussler, Geo. W., 1345 Oak St., San Francisco. 1911.
- Scclater, William Lutley, 10 Sloan Court, London, S. W., England. 1909.
- Schneider, J. J., Box 363, Anaheim. 1899.
- Sharp, Clarence S., Escondido. 1902.
- Sharples, Robert P., West Chester, Penn. 1911.
- Shaw, W. T., 600 Linden Ave., Pullman, Wash. 1911.
- Sheldon, H. H., The Langdon, 2218 Dana St., Berkeley. 1903.
- Shelton, Alfred, R. F. D. 1, Petaluma. 1909.
- Shepardson, D. I., 1128 Hobart Blvd., Los Angeles. 1909.
- Sherman, Miss Althea R., National, Iowa. 1911.
- Shufeldt, Dr. R. W., 3356 18th St., N. W., Washington, D. C. 1911.
- Skinner, E. H., 745 W. 17th St., Los Angeles. 1900.
- Sloanaker, Jos. L., 411 N. First St., Newton, Iowa. 1910.
- Smith, Allyn G., Box 263, Redlands. 1909.
- Smith, Austin Paul, Box 141, Brownsville, Texas. 1907.
- Smith, C. Piper, care of H. A. Menker, 1371 Main St., Buffalo, N. Y. 1905.
- Smith, Frank, Univ. of Ill., Urbana, Ill. 1911.
- Smith, Wilfred, 1111 6th St., Santa Monica. 1911.
- Snyder, Gaylord K., 928½ W. 1st St., Los Angeles. 1910.
- Snyder, Prof. J. O., Box 775, Stanford University. 1900.
- Sornborger, J. D., Rowley, Mass. 1911.
- Spaulding, E. S., cor. Chapala and Sola Sts., Santa Barbara. 1910.
- Spaulding, F. B., Lancaster, N. H. 1910.
- Spielmann, Oscar P., 1440 Warner Ave., Chicago, Ill. 1909.
- Steinbeck, Wm., 1029 N. Hunter St., Stockton. 1897.

- Stern, Norman B., 2322 Cedar St., Berkeley. 1910.
- Stevens, G. W., Alva, Oklahoma. 1912.
- Stevens, Dr. J. F., Box 546, Lincoln, Neb. 1911.
- Stock, Chester, 492 7th St., San Francisco. 1912.
- Stone, D. D., R. F. D. 3, Oswego, N. Y. 1909.
- Stone, Geo. E., East Hall, University of California, Berkeley. 1912.
- Storer, Tracy I., P. O. Drawer 18, Elmhurst, Greater Oakland. 1910.
- Strecker, John K., Jr., Baylor University, Waco, Texas. 1909.
- Strong, Wm. A., 41 Grand Ave., San Jose. 1912.
- Suksdorf, P. J., Bingen, Wash. 1910.
- Swales, Bradshaw H., Grosse Isle, Mich. 1906.
- Swarth, H. S., Museum Vert. Zoology, University of California, Berkeley. 1897.
- Swett, Miss Helen, Martinez. 1901.
- Tarbell, Miss Olga S., 95 East Villa St., Pasadena. 1906.
- Taverner, P. A., 55 Elmhurst Ave., Highland Park, Mich. 1909.
- Taylor, E. F., Grass Valley, Nevada Co. 1910.
- Taylor, Loren E., Box 482, Reno, Nevada. 1897.
- Taylor, Walter P., Museum Vert. Zoology, University of California, Berkeley. 1905.
- Telford, Harry, Klamath Falls, Oregon. 1912.
- Terrill, L. McL., St. Lambert, Quebec, Canada. 1911.
- Test, Louis Agassiz, Rolla, Missouri. 1908.
- Tevis, Lansing K., Bakersfield. 1912.
- Tevis, Lloyd, Stockdale Ranch, Bakersfield. 1912.
- Thayer, John E., Box 98, Lancaster, Mass. 1906.
- Todd, W. E. Clyde, Carnegie Museum, Pittsburg, Pa. 1909.
- Torrey, Bradford, 1409½ De-la-vina St., Santa Barbara. 1910.
- Tracy, H. C., 504 N. Highland Ave., Hollywood. 1910.
- Treganza, A. O., 62 Hooper Bldg., Salt Lake City, Utah. 1907.
- Tremper, Lauren, 136 Dewey St., Philadelphia, Pa. 1911.
- Trippe, Thomas M., Howardsville, Colorado. 1911.
- Trumbull, J. H., Plainville, Conn. 1911.
- Tyler, John G., 1114 Belmont Ave., Fresno. 1905.
- Ulrich, Al G., 3307 Washington Ave., St. Louis, Mo. 1909.
- Unghish, W. E., Gilroy. 1910.
- Van Fleet, Clark C., 2020 Pacific Ave., San Francisco. 1906.
- Van Rossem, Adriaan, 223 N. Orange Grove Ave., Pasadena. 1909.
- Visher, Prof. Stephen S., University of S. D., Vermilion, South Dakota. 1911.
- Walker, Alex., Armour, So. Dakota. 1911.
- Walker, Ernest P., Laramie, Wyoming. 1910.
- Warren, E. R., 20 W. Caramillo St., Colorado Springs, Colo. 1909.
- Waterman, Miss Edith S., 728 Paru St., Alameda. 1906.
- Wear, Miss Winifred N., 2448 Monterey St., Fresno. 1909.
- Weber, H. B., Colton. 1910.
- Weed, Benj., 1950 Jones St., San Francisco. 1911.
- Welch, L. W., 1515 Atlantic St., Long Beach. 1911.
- Wells, Gurnie, R. F. D. 6, Box 73, Santa Rosa. 1911.
- Wetmore, Alex., 1823 Massachusetts St., Lawrence, Kansas. 1909.
- Wheeler, Mrs. J. W., Box 847, Tucson, Ariz. 1912.
- Wheeler, Roswell S., 296 Park View Terrace, Oakland. 1894.
- Wheelock, Mrs. H. B., 1040 Hinman Ave., Evanston, Ill. 1909.
- Whitcher, Chas. L., Los Olivos. 1911.
- Widmann, Otto, 5105 Von Versen Ave., St. Louis, Mo. 1904.
- Wilcox, Arthur, Santa Maria. 1908.
- Wilder, H. E., Riverside. 1909.
- Willard, B. G., Box 107, Millis, Mass. 1910.
- Willard, F. C., Tombstone, Arizona. 1905.
- Willett, George, 2123 Court St., Los Angeles. 1905.
- Wood, Geo., 7403 Selma Ave., Hollywood. 1912.
- Wood, J. Claire, 179 17th St., Detroit, Mich. 1909.
- Wood, Jesse J., 1119 Garden St., Santa Barbara. 1912.
- Woodruff, Frank M., Chicago Academy of Sciences, Lincoln Park, Chicago, Ill. 1906.
- Wright, Frank S., 14 Cayuga St., Auburn, N. Y. 1910.
- Wright, Howard W., 830 N. Orange Grove Ave., Pasadena. 1907.
- Wueste, Rudolph, Morena Dam, San Diego. 1901.
- Wyman, L. E., R. D. 3, Nampa, Idaho. 1908.
- Wythe, Miss Margaret W., 4231 Terrace St., Oakland. 1912.
- Zahn, Otto J., 2115 Estrella Ave., Los Angeles. 1896.





**For Sale, Exchange and Want Column.**—In this space members of the Cooper Club are allowed one notice in each issue free of charge. Books and magazines can be offered for sale or exchange; bird skins and eggs can be offered in exchange, but *not for sale*. Notices must be written plainly, on one side only of a clean sheet of paper. For this department address W. LEE CHAMBERS, *Eagle Rock, Los Angeles County, California.*

**BATS WANTED.**—The undersigned is anxious to secure *live* bats (*Chiroptera*) for photographing and study. Information as to the location of colonies will be gratefully received. Living bats may be sent by express, charges collect, provided they are enclosed in strong but perforated boxes so that the air will circulate freely. In special cases, outlay necessary to visit colonies will be refunded. Correspond with:—J. GRINNELL, *Museum of Vertebrate Zoology, University of California, Berkeley, Calif.*

**WANTED.**—Journ. Maine Ornith. Soc., vols. I, II; vol. III, nos. 1–4; vol. IV, nos. 2, 3; vol. V, no. 1; all after vol. X; Auk, vols. I to VIII; vol. IX, no. 3; vols. XI, XII, XIII, XXVIII; Osprey, vol. I, no. 2; vol. IV, no. 3; Nidologist, vol. I, nos. 2–6; Bull. Mich. Ornith. Club, any volume.—DR. T. W. RICHARDS, *U. S. Navy, 1207 19th St. N. W., Washington, D. C.*

**WANTED.**—Will pay cash for any of the following magazines in good condition: Agassiz Ass'n Bulletin, I, 3, 6; Amer. Mag. of Nat. Science, I, 6; Am. Osprey, I, 1, 4, 5, 7, 8, 9, 10, 11; Auk, vol. II to VI; Hawkeye O & O, I, 2, 4, 6, 7, 8, 9, II, 2, 4; The Hummer, I, 1, 2, 3, 4, 7, 9; The Loon I, 1, 2, 6; Oologist (Utica), vols. I to IV; Oologist's Exchange, II, 4; Orn. & Botanist, II, 3, 4, 5, 7, and any after; O & O, VIII, 9, 10, 11, 12; Stormy Petrel, I, 1, 6; Warbler, Nov.-Dec., '03; O & O Semi-Annual, I, 1; Bull. Nuttall Orn. Club, I, 4; and any numbers of the following: Bay State Oologist, Curlew, Hoosier Naturalist, The Owl. Send list of what you have; I will make cash offer.—DR. W. I. MITCHELL, *603 Beacon Bldg., Wichita, Kansas.*

**WANTED FOR CASH.**—Complete set or parts of The Condor, Oologist, Bird-Lore, Wilson Bulletin, Ornithologist & Oologist and *The Condor* vols. I to X, inc.; Am. Ornithology, Birds, Birds and Nature; also books by Cones, Torrey, C.C. Abbott, Keyser, Mrs. Bailey, Ridgway, N. S. Goss.—J. W. SWIFT, *Stockport, Ohio.*

**WANTED.**—Collecting parties desiring to visit the Pacific coast islands south of San Francisco to Magdalena Bay, Mex., may charter the fast boat "Flyer". Special rates to Cooper Club members and their friends. Write C. B. LINTON INVESTMENT Co., *Long Beach, Cal.*

I WILL PAY a good price for the following

publications, all to be sound, in their original covers and suitable for binding. I will accept bound vols. when bound in with original covers. Birds, Birds and Nature, vols. 1 to 11 inclusive. The Oologist of Utica, N. Y., with its continuation the Ornithologist & Oologist, vols. 1 to 6 inclusive, all nos. of vol. 9 except 1, 5, 11 and 12; The Oregon Naturalist, nos. 2 & 3, vol. 1, nos. 1 & 2, vol. 2; Bulletin of Michigan Ornithological Club, all nos. issued after no. 1 of vol. 1; The Atlantic Slope Naturalist, all nos. issued except nos. 2, 3, 5 of vol. 1; also all numbers issued of the following: The Ornithologist and Botanist; The Oologist's Exchange; The Wolverine Naturalist; The Oologist's Advertiser; The Owl; Stormy Petrel; Gameland; The Museum; Curlew; The Hummer; The Egg Collector; The Bittern; Ohio Naturalist; Cassinia, and many others too numerous to mention, so write me what you have. I have complete vols. of Oologist and Bird-Lore for exchange. GEORGE SETH GUION, *Napoleonville, La.*

**WANTED.**—Correspondence with all persons who have done any kind of ornithological work in Wyoming. Send me names and addresses of yourselves and friends. ERNEST PILLSBURY WALKER, *Dept. of Biology, Univ. of Wyom., Laramie, Wyo.*

**WANTED.**—I will give two dollars cash for EACH number, in ORIGINAL COVERS, CLEAN and in PERFECT CONDITION for binding, of the following publications, to-wit: Wilson Bulletin, nos. 4, 6, 7; The Osprey (new series), vol. I (1902), no. 7; The Oologist, vol. III (1886) vol. IV (1887), no. 1; vol. V (1888), no. 6; vol. VI (1889), no. 4; The Journal of the Maine Ornithological Society, vol. IV, numbers 3 and 4; vol. V, no. 3; The Iowa Ornithologist, vol. II, no. 4; vol. IV, nos. 2 and 4.—G. H. MESSENGER, *President Linden Bank, Linden, Iowa.*

**WANTED.**—Of the Utica Oologist, the following back numbers for which I will pay the highest cash price, viz: Volume II, nos. 1, 2, 3; vol. III, nos. 9, 12; vol. IV, no. 7.—R. M. BARNES, *Lacon, Ill.*

**BIRDS---NESTS---EGGS**



# The Oologist

is the only publication in the United States devoted to these. It is now in its twenty-sixth year. If you are interested, subscribe now. Only Fifty Cents per year.

**The Oologist,**  
Lacon, Ill.

**COLORED PLATES  
OF  
PACIFIC COAST BIRDS**

BIRD-LORE has in preparation a series of biographies of Pacific Coast birds to be issued as Educational Leaflets and to be illustrated by full-page colored plates from drawings by Allan Brooks.

The first of the series, on the California Valley Quail, by Joseph Mailliard, will appear in the issue for September-October, 1912; the second, on the Willow Ptarmigan, by Joseph Grinnell, in the issue for November-December. Others will follow through 1913.

*Special Offer to Members of the Cooper Ornithological Club.*—To members of the Cooper Club we will give the two numbers for 1912, and Vol. XV, 1913, for \$1.00, the price of a year's subscription.

This offer holds good only during October, 1912, and subscriptions should be sent directly to our publication office at Harrisburg, Pa.

**D. APPLETON & CO.**  
Publishers of Bird-Lore

## BIRD FOLKS



Will find complete outfits for Camping and Tramping under our big roof.

CLOTHING  
FOOTWEAR  
EQUIPMENT

Small calibre guns and ammunition, game bags and carriers. Kodaks and Photo Material.

**The Wm. H. Hoegee Co., Inc.**  
Greatest Sporting Goods House on the Pacific Coast  
Phones Home 10087; Main 8447  
138-142 South Main St., Los Angeles

The Management of  
"The Condor"  
wants to purchase  
or exchange for

Odd Numbers of  
**VOL. I  
BULLETIN OF THE  
COOPER  
ORNITHOLOGICAL CLUB**

ADDRESS

W. LEE CHAMBERS,  
Eagle Rock,  
Los Angeles Co., Calif.

When replying to advertisements please mention THE CONDOR.



